



# Workforce Optimization Suite

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## Strategic Planning Guide

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## ***Preface***

Welcome to the Witness Workforce Management Solution.

Witness Systems Workforce Management combines proven Workforce Management functionality with insightful performance management and actionable learning capabilities. Comprised of an easy to use set of software and services, it simplifies the complex task of forecasting and scheduling, enabling your contact center to capitalize on the unique skills and proficiencies of each agent. As a result, you can reduce costs by staffing appropriately to meet your workload, drive business growth, and improve employee effectiveness and retention.

With Witness Systems Workforce Optimization you can:

- Create optimal schedules easily to reduce costs, while reflecting each agent's unique skills, proficiencies and preferences
- Increase forecasting accuracy by factoring in a variety of methods and historical patterns
- Heighten employee satisfaction, with online shift swapping, optimal shift bidding, time-off requests, and more
- Monitor adherence, intra-day trends, and other key contact center metrics in real time
- Schedule and manage single, multiple, and virtual contact center sites across time zones

## **Master the Complexities of Forecasting and**

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## **Scheduling**

In today's contact center, customer call volumes are moving targets. And when you factor in multiple sites, expanded media options, agent proficiencies and preferences, and customer expectations, the task of forecasting and scheduling becomes difficult to manage without sophisticated analysis.

That's why Witness Systems offers Workforce Management, a proven, easy-to-use set of software and services that simplifies the complex task of forecasting and scheduling while enabling contact centers to capitalize on the unique skills and proficiencies of every agent. With Witness Systems' Workforce Management, you can reduce costs by staffing appropriately to meet your workload, drive business growth, and improve employee effectiveness and turnover.

Workforce Management is part of a portfolio of solutions from Witness Systems. Long recognized for our browser-based, multimedia quality monitoring, customer interaction recording and compliance functionality, Witness Systems now includes the proven Workforce Management solutions of Blue Pumpkin, a Witness Systems Company. Thousands of users around the world rely on our solutions each day to help them optimize their performance and capture customer intelligence.

## **Select Functionality that Meets Your Needs**

To meet the needs of a broad spectrum of contact centers, Workforce Management is available in packages that deliver different levels of functionality. Whether you're an international organization, a small- to medium-sized business, or something in between, Witness Systems has foundation-level and strategic offerings that can help you receive extended business value.

Depending on your business needs today and in the future, you can invest in the full Operational Series Workforce Management Package, which is comprised of functionality designed to optimize agent performance, reduce risk, and automate quality assurance. Our Advanced Series Workforce Management Package builds on Operational Series functionality and focuses on optimizing contact center performance through such business drivers as first call

resolution, up-selling, cross-selling, and contact center customer satisfaction. Although the specific features of the Operational and Advanced packages differ, they include some or all of the following:

- **Forecasting and Scheduling**—Accurate forecasting is the critical first step in managing your workforce. Witness Systems' Workforce Management integrates with your ACD and uploads historical data directly from your ACD's database. Since call volumes vary depending on marketing campaigns, seasons, holidays, and other events, Operational Workforce Management allows you to select, combine, and alter historical data to predict future call volume and handle time. You can also set up profiles to model call volume behavior for different events and circumstances.

Unlike other forecasting and scheduling applications, Workforce Management's patented skills-based engine incorporates the unique skills and proficiency levels of each agent. It produces optimal schedules down to the quarter hour by balancing the defined shift rules, work patterns, breaks, off-phone times, agent preferences, agent skills, and targeted service level goals. By matching the right agents with the right customers, productivity increases—and so do agent and customer satisfaction. And when your staffing levels precisely match your contact volumes, costs go down. For example, you can:

- Schedule single, multiple, or virtual contact centers across all time zones
- Accommodate a dedicated, blended, or task-switching work environment
- Schedule meetings or training without impacting service levels
- Automate compliance with government and union regulations through a comprehensive set of work rules
- Create schedules based on skill priorities that align with your call routing strategy
- Evaluate different “what if” scenarios, such as full-time versus part-time, to ensure that you have the right resources to meet the expected demand
- Create and schedule teams as a unit to support training and accommodate employee concerns, such as carpooling or childcare arrangements

- **Adherence**—To help you manage and fine-tune your service levels throughout the day, Operational Workforce Management monitors adherence to schedule and shows you who's on the phone and who's not, so you can take corrective action right away. The intraday “Pulse” feature provides a real-time, graphical view of forecasted, actual, and predicted call volume, handle time, service level statistics, and other critical information. You can configure alerts to notify users of deviations from plan and use trends to reforecast, reschedule, and proactively take appropriate staffing corrective actions.

Advanced Workforce Management goes a step further by providing a complete view of adherence that shows all agent activities, including front- and back-office tasks such as fax and paper mail. Your supervisors receive instant alerts for out-of-adherence states, enabling them to correct problems right away while receiving a true picture of shrinkage in your contact center.

- **Contact Center Monitoring and Management**—No matter how carefully you plan, change is a constant in the contact center. To help you continuously fine-tune your operations, Witness Systems Workforce Management’s intraday “Pulse” feature provides a graphical view of contact volume, handle times, service level statistics, agent adherence levels, and other critical information. With Pulse, you can:
  - Monitor key metrics that get updated with each fresh batch of data from the ACD
  - Track and compare actual, forecasted, and required statistics by individual queue or combined queue
  - View deviations of key contact center metrics in percentages or absolute numbers
  - View intraday trends and historical data

Our Advanced Workforce Management solutions provide a complete view of all agent activities, including front- and back-office tasks, such as handling faxes and traditional mail. Your supervisors receive instant alerts for out-of-adherence states, enabling them to correct problems right away while receiving a true picture of shrinkage in your contact center. Better still,

intraday management capabilities display trends, enabling you to reforecast and reschedule for the remainder of the day.

Witness Systems' Workforce Management includes role-appropriate scorecards that display actual employee performance metrics. Our advanced solutions include an extensive set of predefined key performance indicators (KPIs), enabling your contact center staff to see how they're performing against their goals. This visibility into performance can motivate your staff to improve while enabling managers to identify trends and take the appropriate action.

- **Web-based Agent Self-Service**—Witness Systems Workforce Management lets agents easily manage and contribute to their own schedules without impacting service levels. By bringing Workforce Management to the agent desktop, you can build agent morale and retention while enabling your managers to focus on more critical areas, such as coaching and performance-related tasks.

Using any Web browser, agents can securely:

- Request vacations and other types of time off, even down to portions of a day. (This applies to centers that use seniority or rank as part of their scheduling practices.)
- Set preferences for days off and start times. Agents indicate their first, second, and third choices for start times for each day of the week. The scheduling algorithm balances these preferences and then develops a schedule that optimizes center and agent requirements.
- Swap shifts. Agents can post, negotiate, and request shift swaps via an online Swap Board. Swap requests are screened by Workforce Management's conflict checker and forwarded to managers for quick and easy processing.
- View schedule and time-off information. With just a glance, agents can get a summary of their schedules for the week and the status of their shift swap, time off, and vacation requests.

- **Actionable Learning**—To help your agents develop their skills and career paths, Witness Systems Workforce Management enables you to produce your own library of best practices from recorded customer interactions. By leveraging your finest examples of customer service, you can help your

agents learn valuable skills and procedures. A browser-based interface allows agents to take training right at their desktops, in a classroom, or remotely.

Supervisors select the appropriate training sessions from a library of courseware, assign the training to agents, monitor completion, and track the effectiveness of the training over time. A flexible system of access rights enables supervisors to browse through course completion reports and subsequent agent performance records for individual students, teams, or contact centers. This enables you to determine areas for individual or group improvement and take action. It's an efficient, consistent way to handle training across your entire enterprise.

## **Receive Guidance from World-Class Consultants**

The Witness Systems' Workforce Management packages include implementation services. We also offer business consulting services that can help you get the most from your investment. These services are delivered by Witness Systems' seasoned consultants, who have years of experience with contact centers of all sizes, types and industries from around the globe. Our goal is to partner with you and to provide world-class services that offer measurable results and a rapid return on investment. From implementation to consulting to technical support and training services, you can be confident that Witness Systems services are delivered by people who understand business practices and contact center operations-and care about your success.

## **About This Guide**

This guide is intended for users of Witness Systems Strategic Planning. It guides you through the steps to use Witness Systems Strategic Planning, an intuitive desktop solution for strategic resource planning.

This guide is not intended to teach the basics of computer or software operation or use, and does not contain tutorial information. It is assumed that you are experienced in working

with contact center equipment and software applications as well as PC workstation hardware and software.

Please note that **this document is intended primarily for viewing on-line**. However, the format of the document is based on that of a printed manual, to support customers who print all or portions of the document. For similar reasons, entries in the Table of Contents, cross references, and index entries refer to page numbers. Those same entries function as hyperlinks for ease of use when the document is viewed electronically.



Colors may not print legibly on black and white printers. If you are using a non-color printer, select the option to print colors as black.

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In addition, please note that **the screen shots used in this guide are for illustrative purposes only**. There may be some differences between what you see in the product and these screenshots, but those differences should not be significant or affect the accuracy of the information contained in this guide.

## In This Section

This section contains the following information:

- How to send Witness Systems comments about this document. See page 11.
- How this manual is organized. See page 12.
- How to get help. See page 13.
- How to contact Witness Systems Technical Support. See page 14.
- Related Documents. See page 15.
- Conventions used in this manual. See page 15.

## Comments?

Witness Systems believes that the documentation for a product is an integral part of the product itself. We know that the quality of this document can affect the overall quality and usability of the Witness Systems product which it documents. Therefore, we are continuously looking for ways to improve our product

documentation. Your comments are valuable and will be carefully considered before publishing the next release of this document. If you find any errors, or have suggestions for improvements to this document, please contact Witness Systems at:

**<http://www.witness.com/support>**

When calling with comments about this manual, please provide your company name, your name and job title, and how you can be contacted. Please provide as much of the following information as possible.

	Excellent	Good	Average	Fair	Poor
Information accessible?					
Manual well organized?					
Information complete?					
Illustrations adequate?					
Text easy to understand?					

Is anything in the manual confusing or difficult to understand? If so, what and how?

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What could we do to improve the manual?

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Other comments. Please include page numbers and section titles where appropriate.

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## Manual Organization

This guide consists of the following chapters:

- **Training Tasks**—contains task summaries that you should use as guides during your first few sessions with Strategic Planning.
- **Tutorials: Frisbee Central, Inc.**—guides you through more advanced uses of Strategic Planning, helping you to learn about shortcuts and best practices by following with the narrative on your computer.



## If You Need Help

Witness Systems is a strong believer in customer satisfaction. Our products are designed to provide you with the best performance for your money and we want to make sure you get what you paid for. One way of doing this is to provide you with the best support, including the following resources:

**Witness Systems, Inc.'s World-Wide-Web site:** This facility allows users world wide fast access to product information, marketing and sales information, information about the company, technical documentation, support case management, and support solutions information.

**Direct Internet FTP:** This facility greatly speeds up transfer of new and upgraded software to all Witness Systems customers.

## Technical Support

Help from Technical Support is as near as your keyboard or your telephone. However, before you contact us, please read the following section. We can provide faster and better service if you have certain information available when you contact us.

## Before You Contact Technical Support

Many problems can be quickly solved with the information in the on-line help system or in this manual. When running the product, you can select the Help button in the upper right portion of the window to get help for the active window or dialog box.

If you are unable to solve a problem by using the on-line help or this manual and need help from Technical Support, please do the following before you contact Technical Support:

- 1 Write down the exact problem and any details which may help us solve the problem. If you can consistently reproduce the problem, please list the steps to reproduce it.
- 2 Have at least the following information available when you contact Technical Support.
  - Product name and version number

- Server and client operating systems and service pack version numbers
  - Supporting files and screenshots (if available)
  - ACD type and reporting package (for ACD related issues)
  - The wording of any error messages from the product and/or operating system.
  - Has this problem occurred previously? If it is new, did you change your system configuration recently?
- 3 Log on to the Technical Support **eSupport** web page at <http://www.witness.com/support>.

## Contacting Technical Support

Witness Systems provides a range of support options:

- Online via the **eSupport** web site, including e-mail contact.
- Telephone support is available, based on your maintenance contract.



If using telephone support, please call from a phone near your computer. We may need you to access information or run the program while you are on the phone.

	Americas	Europe/Middle East/ Africa/Asia Pacific
	<a href="http://www.witness.com/support">http://www.witness.com/support</a> (If you are reading this manual on-line, click on the URL above to activate your web browser and go to the eSupport page.	
	+1 800 4 WITNESS (USA toll-free) +1 770 754 1870	<b>Europe/Middle East/Africa</b> +0800 496 1111 +44 (0)1372 869 570 <b>Hong Kong/Asia Pacific</b> +852 8103 0104 <b>Australia</b> 1 800 600 806 <b>New Zealand</b> +61 2 8223 9493 <b>Japan</b> +81 (0)3 5919 1875



## Related Documents



For further information about the Witness Systems Workforce Optimization Suite, see the following Witness Systems documents:

- *Witness Workforce Optimization Suite Agents Guide*
- *Witness Workforce Optimization Suite Managers Guide*
- *Witness Workforce Optimization Suite Administration Guide*
- *Witness Workforce Optimization Suite Schedulers Guide*

## Conventions

The following table shows the conventions that are used in this manual.

Convention	How Used
blue	Notes in this document are in blue and are indicated by the following symbol:  Apart from notes, references to other sections and pages in this document are also in blue. You can click on the blue text to go to the referenced section or page.
<b>bold</b>	<b>Bold text</b> in a sentence shows commands or menu choices that you are to select, or text or commands that you are to enter. It is also used to highlight the first use of a new term. This term may be defined in the Glossary or described in the text where the word is introduced.
gold	Tips in this document are in gold and are indicated by the following symbol: 
<i>italics</i>	Text in <i>italics</i> is used to call attention to important information.

Convention	How Used
red	<p>Cautions and warnings in this document are in red. Cautions are indicated by the following symbol:</p>  <p>Warnings are indicated by the following symbol:</p> 
<b>user entry</b>	<p>Bold text in an example shows text or commands that you should enter. It also distinguishes software function terms and commands, library names, file names, and directory path names.</p> <p>Example: Type <b>a:\install</b>.</p>
<b><i>user variable</i></b>	<p>Italic and bold screen text shows a variable that you are to replace with an actual value, such as a number or name.</p> <p>Example: enter <b><i>C:\&lt;directory name&gt;</i></b></p>

# Chapter 1

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## Training Tasks

This chapter contains task summaries that you should use as guides during your first few sessions with Strategic Planning. Note that these are only basic training tasks. For guidance in using Strategic Planning for powerful what-if analyses, consult the Tutorial Examples in the next chapter.

Specifically, this chapter covers the following:

- Task 1: Configuring a new scenario from scratch
- Task 2: Estimating simple staffing needs
- Task 3: Evaluating cross-skilled staffing
- Task 4: Optimizing Staffing Plans
- Task 5: Configuring cost estimates
- Task 6: Importing from the Workforce Optimization Suite Database
- Task 7: Exporting to an Excel Report

Before beginning these training tasks, be sure you have the Examples folder installed with Strategic Planning. This folder is normally found in **Program Folders..Witness Systems..Witness Systems Strategic Planning**. Inside Examples, there is a Strategic Planning scenario called **FrisbeeSample.Itp** and several copies of the scenario. You will need the FrisbeeSample example scenario for several training tasks in this chapter and for the tutorials in the next chapter.



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The screen shots used in this guide are for illustrative purposes only. There may be some differences between what you see in the product and these screenshots, but those differences should not be significant or affect the accuracy of the information contained in this guide.

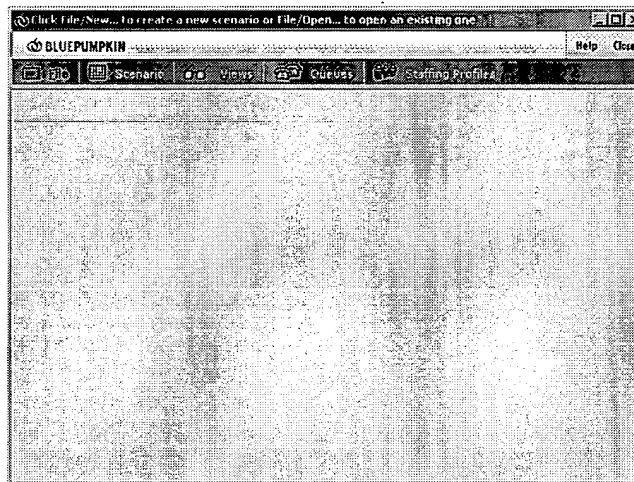
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## Task 1: Configuring a new scenario from scratch

**Purpose:** *In this task you will learn how to configure your new scenario to match your contact center. Scan this task the first few times you create a new scenario to be sure that you have not forgotten to set anything.*



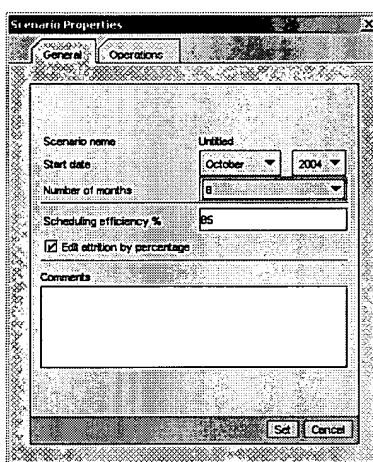
- 1 **Create a new scenario.** Start Strategic Planning by double-clicking your desktop icon or by using the Start button. Usually Strategic Planning is installed so that you can launch it using **Start...Programs...Witness Systems Strategic Planning...Witness Systems Strategic Planning**. When Strategic Planning opens, you first see a splash screen, then the Strategic Planning menubar because there are no scenarios open.



Usually, when you want to create a new scenario, you will do so by opening a reference scenario that you have already created, making changes to it, and renaming it when you save it (using **File..Save As**). This is a useful way to create new scenarios because you can capture all of the configuration details that you have entered before. However, for today, you will be opening a

completely new scenario. Select **File..New** to create the new scenario. The Scenario Properties window opens. This window contains basic configuration information that you need to specify before you start using your scenario. Whenever you are using Strategic Planning, you can reach this Properties window by selecting **Scenario...Properties** from the menubar.

- 2 **Set General properties.** In the **General** tab, select the appropriate start date and number of months. A scenario must contain a minimum of 3 months. If a scenario includes more than 12 months or so, it can become difficult to look at all the numbers on one screen.



For this exercise, select a start date of October 2004 and a total scenario timespan of 6 months. Note that the Scenario name is **Untitled**. The name will change when you first save the scenario to be the same as the filename you specify for saving the scenario.

**Scheduling efficiency %** defaults to 85%. This factor is a measure of how well you are able to schedule your agents to serve the demand, and is also called schedule flexibility or schedule inflexibility. Scheduling efficiency is a very important number because Strategic Planning uses it to calibrate to the practices and performance of your particular call center's operations. After installation, we will help you calibrate scheduling efficiency by entering historical data into Strategic Planning and running its simulation system. As a general rule, the efficiency will be a number between 80% and 95%. If you use automated workforce scheduling and have a good full-time/part-time mix of agents, the efficiency can be set conservatively

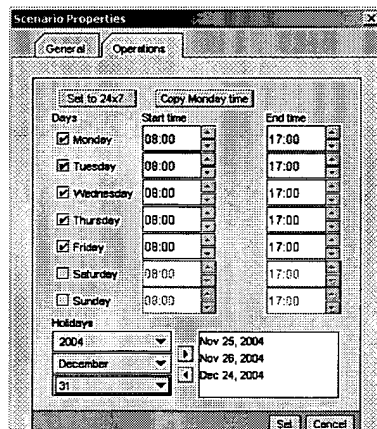
to 90%. If you have fixed schedules but highly variable incoming contact volume distributions, the efficiency can be as low as 85%.

For this example, keep Scheduling efficiency at 85%.

Click the **Edit attrition by percentage** checkbox to enter attrition as a percentage of your total head count. Leave it unchecked to enter attrition as a fixed number of employees on a month-by-month basis.

The **Comments** box is a very useful place to annotate all of your assumptions as well as details concerning this scenario. For example, you may one day take your standard scenario and do a what-if analysis in which you cross-train more agents to compensate for a March spike in contact volume. You could note this in the comments box before saving so that you can keep track of why you created the new, modified scenario. Comments are especially useful to keep track of changes and the testing embodied by this particular scenario.

- 3 **Set Operations properties.** Now under **Scenario..Properties** select the **Operations** tab. Set the hours of operation as appropriate.



To set 24-hour operations, click **Set to 24x7**.

Click the **Copy Monday time** button to copy Monday's start and end times to the other days you have checked.

For this training task, make sure that the center is open 5 days a week (Mon - Fri) from 8 AM to 5 PM.

In addition, specify holidays (days when the contact center would ordinarily be open but is closed) for this scenario. These



holidays are taken into account when Strategic Planning makes its calculations. Select the date for each holiday and click **Add**. Choose holidays that impact one or more contact center queues. You will be able to later annotate, for each queue and group of agents, how the holiday affects them specifically.

Click **Set** to open the new scenario.

- 4 **The Scenario View.** The configuration is now complete, and Strategic Planning opens its main scenario view with a new, blank scenario. This is the screen that you will use the majority of the time when you use Strategic Planning to do what-if analyses.

The screenshot displays the Strategic Planning software interface with three data tables. The top table, 'Queue #1 (Q1): Volume, Service goal = 90% in 10 seconds', shows metrics for Oct, Nov, Dec, Jan, Feb, Mar, and Total. The middle table, 'Staffing Profile #1 (P1): Occupancy = 80%, Agent pool hours/week = 160, total agent headcount = 8', shows staffing metrics for the same months and total. The bottom table, 'Totals', shows overall metrics for Oct, Nov, Dec, Jan, Feb, Mar, and Total.

	Oct	Nov	Dec	Jan	Feb	Mar	Total	Min	Max
Queue #1 (Q1): Volume, Service goal = 90% in 10 seconds	0	0	0	0	0	0	0	0	0
Base contact volume	0	0	0	0	0	0	0	0	0
Base growth (%)	0	0	0	0	0	0	0	0	0
Contact volume	0	0	0	0	0	0	0	0	0
Growth (%)	0	0	0	0	0	0	0	0	0
Volume (%)	0	0	0	0	0	0	0	0	0
Base AHT	0	0	0	0	0	0	0	0	0

	Oct	Nov	Dec	Jan	Feb	Mar	Total	Min	Max
Staffing Profile #1 (P1): Occupancy = 80%, Agent pool hours/week = 160, total agent headcount = 8	0	0	0	0	0	0	0	0	0
Hours	0	0	0	0	0	0	0	0	0
In training	0	0	0	0	0	0	0	0	0
Attrition	0	0	0	0	0	0	0	0	0
Attrition (%)	0	0	0	0	0	0	0	0	0
Transfer agents	0	0	0	0	0	0	0	0	0
Headcount	0	0	0	0	0	0	0	0	0
Effective headcount	0	0	0	0	0	0	0	0	0
Occupancy (%)	0	0	0	0	0	0	0	0	0

	Oct	Nov	Dec	Jan	Feb	Mar	Total	Min	Max
Totals	0	0	0	0	0	0	0	0	0
Contact volume	0	0	0	0	0	0	0	0	0
AHT	0	0	0	0	0	0	0	0	0
Service level (%)	100	100	100	100	100	100	100	0	0

Since Strategic Planning is a *document-based* application, you can open up many different scenarios at once. Each scenario you open has a separate tab, allowing you to flip back and forth between scenarios, comparing them easily. Something you will do frequently is resize the main screen, so practice this now. Resizing the window uses standard Windows procedures. If the screen is too tall and runs off the bottom of the screen, change it by resizing the top edge of the window down, then clicking within the screen and dragging the entire window up.

Note that there are two horizontal dividers that separate the window into three areas, or panes. The horizontal dividers can be dragged up and down—try this. You will find it useful when concentrating on different activities.

Now let us briefly introduce the three main sections of the screen. The top section is where you define and visualize your

queues. The system begins with just a single queue, called **Queue #1**. This queue is, by default, a voice queue with a service level goal of 90% in 30 seconds. You can have tens or even hundreds of queues in this top pane, and by scrolling, jumping, and re-ordering them, you can easily manipulate them.

The middle pane is used to define and visualize Staffing Profiles. Just as in Forecasting and Scheduling, staffing profiles are used to distinguish among groups of agents based on their particular properties, for example, wage differences, shrinkage, skills, and so forth. As with the Queues pane, the Staffing Profiles area can contain tens or even hundreds of staffing profiles, and you can scroll and jump between them, as you will see in later training tasks.

Finally, the bottom pane is a Totals summary, showing information such as total cost and total headcount across all queues and staffing profiles.

- 5 **Using Views.** There are a great many lines of information shown on this Scenario screen at once, and we have a special facility that allows you to view just the lines that matter most when you are undertaking a particular activity. Click on the **Views** menu and note that there are a number of pre-defined Views for various activities. Select **Forecasting**.

	Oct	Nov	Dec	Jan	Feb	Mar	Total
Base contact volume	0	0	0	0	0	0	0
Base growth (%)	0	0	0	0	0	0	0
Contact volume	0	0	0	0	0	0	0
Growth (%)	0	0	0	0	0	0	0
Volume (%)	0	0	0	0	0	0	0
Base AHT	0	0	0	0	0	0	0
AHT	0	0	0	0	0	0	0

Note that the queue, **Queue #1**, now shows just the contact volumes and average handling times.

- **Base contact volume** and **Base AHT** show values imported from the Forecasting and Scheduling data base, while the **Contact volume** and **AHT** rows show the values that you actually use as your scenario forecast for this particular scenario.
- **Base growth (%)** shows the growth in the base contact volume data, imported from the Witness Systems Workforce Optimization Suite, as a percentage.

- **Growth (%)** shows the growth of contact volume you entered as a percentage.

Now select **Views..Everything**. In this mode, every row becomes visible at once. Let's look at all the rows in the Queues pane first. You may need to use the scroll bar along the right side of the Queues pane to see all the rows, or you can drag the divider bar below the queues pane down.

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Base contact volume	0	0	0	0	0	0	0	0	0	0	0	0
Base growth(%)	0	0	0	0	0	0	0	0	0	0	0	0
Contact volume	0	0	0	0	0	0	0	0	0	0	0	0
Growth (%)	0	0	0	0	0	0	0	0	0	0	0	0
Volume (%)	0	0	0	0	0	0	0	0	0	0	0	0
Base AHT	0	0	0	0	0	0	0	0	0	0	0	0
AHT	0	0	0	0	0	0	0	0	0	0	0	0
Service level (%)	0	0	0	0	0	0	0	0	0	0	0	0
Required hours	0	0	0	0	0	0	0	0	0	0	0	0
Over/under hours	0	0	0	0	0	0	0	0	0	0	0	0
Capacity	0	0	0	0	0	0	0	0	0	0	0	0
Required FTEs	0	0	0	0	0	0	0	0	0	0	0	0
Over/under FTEs	0	0	0	0	0	0	0	0	0	0	0	0
Total revenue	0	0	0	0	0	0	0	0	0	0	0	0

- **Base contact volume** and **Base AHT** contain the data imported from Witness Systems Forecasting and Scheduling. Contact volume and AHT contain data that you enter.
- **Base growth (%)** shows the growth in the base contact volume data, imported from the Witness Systems Workforce Optimization Suite, as a percentage.
- **Growth (%)** shows the growth of contact volume you entered as a percentage.
- **Volume %** is simply a useful measure of the proportion of total contact volume contained in each month.
- **Service level** is the service level prediction that Strategic Planning will make, expressed as a percentage, given the Queue statistics and the hiring and training plans that you specify to Strategic Planning.
- **Required hours** will compute for you the total number of dedicated staff hours (post shrinkage) required to fulfill the service level goal, while **Over/under hours** will show overstaffing and understaffing, given your hiring and training plans.
- **Capacity** is a useful row when conducting capacity planning. It will compute the minimum number of seats required to achieve the service level goal during contact volume peaks, as defined by the contact volume forecast and predicted distribution.

- **Required FTEs** and **Over/under FTEs** show the same information as **Required hours** and **Over/under hours**, but instead of showing you values in staff hours, they allow you to specify an FTE divisor so you can see the values in full-time equivalents instead of hours if you prefer.
- **Total revenue** is a row that is only added to the main window when a queue is marked as generating revenue. It shows the total monthly revenue generated. Revenue details can be edited in the **Edit Queue** dialog box

Each of the three panes in Strategic Planning's main window can also display up to five summary columns to the right of the month columns. Summaries are available for the following statistics:

- **Total:** The total of the values displayed for each row.
- **Max:** The highest value for that row.
- **Min:** The lowest value for that row.
- **Avg:** The average of the values of that row. Note the following exceptions: AHT is weighted by volume; Service Level is weighted by volume; Growth is shown as a percentage.
- **Std:** The standard deviation, calculated using the following formula: Square root of  $((\text{Sum}(\text{square of}(\text{monthly value} - \text{average})) / \text{number of months}))$ .

Which summary columns are displayed depends on your view definition. Click [here](#) for information on defining and editing Strategic Planning views.

Now let's look at all the rows associated with the Staffing Profiles, specifically **Staffing Profile #1**.

Staffing Profile #1 (SG) Worksheet		SG: Person month forecast by month - (SG: Staffing Forecast Worksheet)																		
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Max	Min	
Hires		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
In training		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Attrition		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Overhead (FTE)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Overhead (hours)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Overhead (revenue)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Occupancy (%)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

- **Hires** keeps track of the number of agents the current scenario plans for hiring month-by-month.
- **In training**, when applicable, tracks the number of new hires and transferees in training and therefore not effective on their queues yet. The **In training** row only appears when you have

specified that, for these agents, training takes more than zero weeks.

- **Transfer In** and **Transfer Out**, when applicable, track the number of agents that are transferred in or out of the staffing profile.

(Not all Staffing Profiles can have agents hired directly into them. You can, for example, create a staffing profile that is highly skilled, and that existing agents only enter through further training. In such a case, additional rows such as **Transfer In** and **Transfer Out** are also shown for those particular staffing profiles.)



Make sure your figures for **Transfer In** and **Transfer Out** are equal across all profiles.

- 
- **Attrition** keeps track of your predicted attrition on the Staffing Profile on a monthly basis. This field can only be edited if you have chosen to enter attrition as a fixed number. Otherwise this field displays the actual integer number of agents (rounded) as calculated from the attrition percentage.



Attrition occurs on the first day of every month and is applied on the previous month's fully productive headcount (that is, not on newly hired agents or agents in training).

- 
- **Attrition %** is used to keep track of predicted attrition. This field can only be edited if you have chosen to enter attrition as a percentage. Otherwise, this field displays the percentage of agents as calculated from the fixed attrition number.
  - **Overtime hours** is the number of hours of overtime (that is, extra hours of work outside the regular working hours of an agent). The value shown is the sum of overtime hours per month and not per agent. This number is added to the total working hours for that month and the monthly cost is calculated accordingly. Shrinkage factors do not apply to overtime hours.
  - **Head count** computes the total headcount while **Effective headcount** corrects for agents in training.
  - **Shrinkage** refers to the reduction in working hours of an agent. Shrinkage can be caused by breaks, paid vacation, absenteeism, etc. Shrinkage is represented by a percentage;

the number of working hours per agent is reduced by the shrinkage percentage. This row is only shown when you select to display shrinkage month-by-month.

- Finally, **Occupancy** predicts the occupancy level percentage of the agents based on the load they face on the queues that they work.

The bottom pane, **Totals**, shows summary information over all queues and staffing profiles.

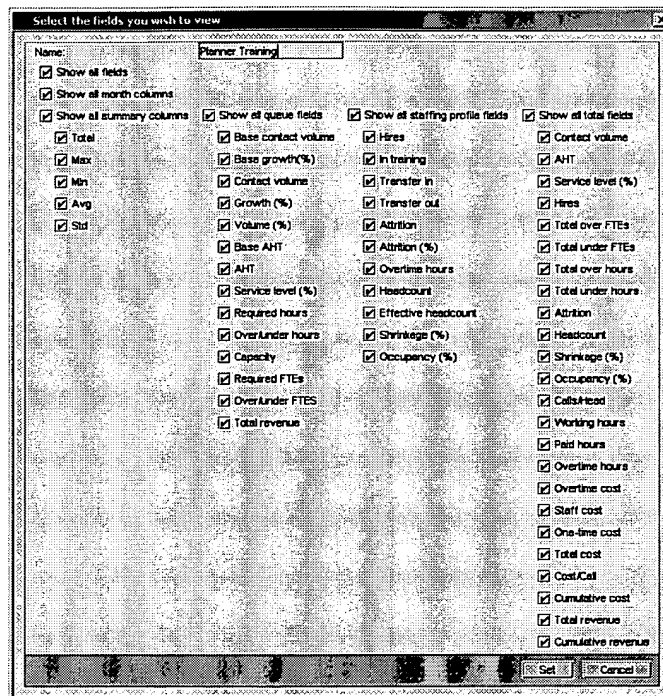
	Oct	Nov	Dec	Jan	Feb	Mar	Total	Min	Max
Contact volume	0	0	0	0	0	0	0	0	0
AHT	0	0	0	0	0	0	0	0	0
Service level (%)	100	100	100	100	100	100	100	100	100
Total over FTEs	0	0	0	0	0	0	0	0	0
Total under FTEs	0	0	0	0	0	0	0	0	0
Total over hours	0	0	0	0	0	0	0	0	0
Total under hours	0	0	0	0	0	0	0	0	0
Attrition	0	0	0	0	0	0	0	0	0
Headcount	0	0	0	0	0	0	0	0	0
Shrinkage (%)	0	0	0	0	0	0	0	0	0
Occupancy (%)	0	0	0	0	0	0	0	0	0
Calls/head	0	0	0	0	0	0	0	0	0
Working hours	0	0	0	0	0	0	0	0	0
Paid hours	0	0	0	0	0	0	0	0	0
Overtime cost	0	0	0	0	0	0	0	0	0
Staff cost	0	0	0	0	0	0	0	0	0
Over-label cost	0	0	0	0	0	0	0	0	0
Total cost	0	0	0	0	0	0	0	0	0
Cost/call	0	0	0	0	0	0	0	0	0

- **Total over FTEs/Total under FTEs/Total over hours/Total under hours** help you establish the overall efficiency of your contact center. You can have the right total number of agents, but they might be distributed poorly, with certain queues overstaffed and other queues understaffed. In such a case the total over and total under will be large numbers, demonstrating that the resources are misallocated.
- **Calls/Head** shows the number of calls divided by your headcount.
- **Working hours** gives the total number of working hours across your center.
- **Paid hours** gives the total number of regular hours being paid, excluding overtime hours.
- **One-time Cost** is a row where you will be able to manually specify additional costs, which will be added to the cost model that we will demonstrate in later training tasks.
- **Cost/call** gives your total cost divided by the number of calls.
- **Total revenue** is the sum of all queues' specified revenues.

The other rows of the Totals pane should be self-explanatory.

- 6 **Creating a custom view.** For the remainder of the training tasks, we want to select the right rows for viewing. We will do this by creating a custom view for training.

To create a custom view, select **Views..New View**. Name your custom view **Strategic Planning Training**. You will be using this view for many of the training tasks later in this chapter.



Select the following fields:

- General: **Show all fields, Show all month columns**. Deselect **Show all summary columns**.
- Queues: **Contact volume, AHT, Service level, Required FTEs, Over/under FTEs**
- Profiles: Show all staffing profile fields (everything is checked)
- Total fields: **Contact Volume, Hires, Headcount, One-time cost, Total cost, Cumulative cost**

Click **Set** to save your Strategic Planning Training View. This view is now saved and can be applied at any time by selecting **Views..Select custom..Strategic Planning Training**.

- 7 **Save, save, save!** Select **File..Save As...** and save this scenario in an appropriate spot with an appropriate file name. As with

any application, save frequently if you are working on a valuable Scenario.

## Task 2: Estimating simple staffing needs

**Purpose:** *In this task you will learn how to take a new scenario and pose simple staffing questions. You will use basic call forecasts to estimate how much staffing is required. Start this task with a new scenario, as described in Task 1, then apply the Strategic Planning Training View.*

- 1 **Specify Queue Details.** First we specify queue details for the existing queue. Select **Queues..Edit..Queue#1**. You can also edit a queue by clicking the queue's name or by clicking the pencil icon at the right of the name. The **Edit Queue** window opens. Specify a meaningful name and abbreviation. For the abbreviation, make sure it's short and unique. For this example, use **Sales** as the queue name and **SL** as the abbreviation.

Specify the Queue type and service goal. Use the Deferred mode for all deferred queues such as email and faxes. If Chat is selected, type the number of chat sessions you expect to handle at the same time in **Max simultaneous sessions**. Note that the service level goal is in seconds. If you select the Deferred queue type, then the service goal is measured in hours instead of seconds. Try this, but be sure to return to an Immediate, or voice type, afterwards.

If you find FTEs easier to use than staff hours, use **Hours per FTE month** to specify a divisor that will be used to translate staff hours to FTEs. Use a meaningful but simple number, such as 160.

The screenshot shows the 'Edit Queue' window with the following details:

- Queue name:** Sales
- Queue abbreviation:** SL
- Queue type:** Immediate (voice) (selected)
- Max simultaneous sessions:** 1
- Service goal:** 30 answered in 30 seconds
- Hours per FTE month:** 160





Hours per FTE month does not affect the simulation. It is only used to divide the numbers created by the simulation from staff hours into FTEs.

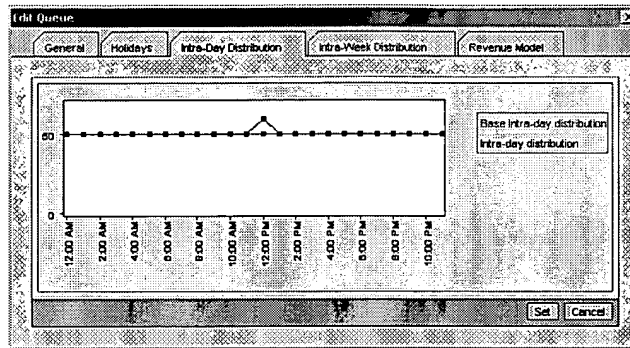
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- 2 **Set Up Holidays.** The Holidays tab lists the holidays entered for the scenario (see page 20). If the current queue will work during a holiday, check **Open** and enter the percentage of the queue's normal contact volume you expect to get during the holiday. In other words, if you usually get 1000 calls and enter 25%, you are forecasting 250 calls for that day. (The forecast for the month remains the same; you are simply redistributing the calls for that day.) For this exercise, leave your holidays as closed.

Holiday	Open	% forecast
Nov 25, 2004	<input type="checkbox"/>	0
Nov 26, 2004	<input type="checkbox"/>	0
Dec 24, 2004	<input type="checkbox"/>	0
Dec 31, 2004	<input type="checkbox"/>	0

- 3 **Examine Distributions.** The distribution tabs graph the way the contact volume arrives over the course of an average day (**Intra-day**) and an average week (**Intra-week**). You can drag the data points up and down with your mouse or click a point and type a new value. Generally, you will import data from your Witness Systems Workforce Optimization Suite database in order to give the appropriate shape to these distributions.

On the **Intra-Day Distribution** tab, introduce a small spike in the distribution at 12 p.m. by clicking the 12 p.m. data point and dragging it upwards from 50 to 60, representing a 20% increase. Notice the value displayed next to the point. Notice also that the graph window resizes itself automatically to accommodate further growth.

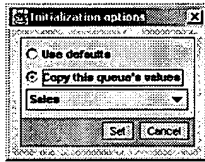


- 4 **Specify a Revenue Model.** Click the checkbox **Queue is generating revenue** if it is applicable to the queue, and input the amount of revenue per call in the field **Revenue per contact**. The queue revenue totals and cumulative totals are displayed in the **Totals** pane of the main window.

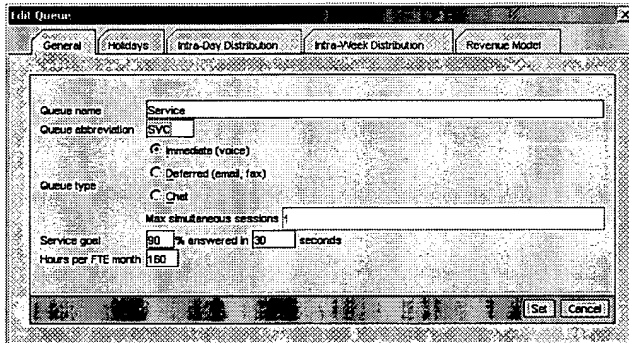


The Revenue per contact should be an average value for the queue, not the average revenue generated on a portion of the queue's contacts. To compute this number, divide the total revenue generated by this queue in a representative time period by the total number of calls offered on that queue in that same time period.

- 5 Click **Set** to leave the Edit Queue window and save the settings.
- 6 **Create a second Queue.** Suppose we need to assess the needs for two separate queues. Select **Queues..Create new queue**. As a shortcut, you can copy values from an existing queue instead of using defaults. Select **Copy this queue** to copy your first queue's values and click **Set**.



Then specify the new queue's name and abbreviation (use **Service** and **SVC**).



Click the **Intra-Day Distribution** tab and notice that the spike you introduced in step 3 into the Sales queue has been copied into this queue. This is an excellent way to create new queues that use the same distribution patterns as other queues. Click **Set** to return to the main page of Strategic Planning.

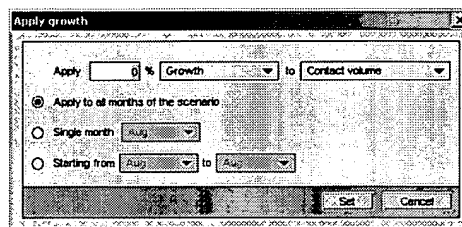
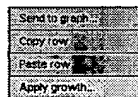
- 7 **Enter queue statistics.** Now let's enter data in the **Contact Volume** and **AHT** rows of the Sales queue. In the first month specify 10,000 for the contact volume and press the **Tab** key. Notice how the rest of the row is automatically filled. For **AHT**, specify 300 in the appropriate row of the first month and fill the row. You can make specific adjustments. For example, in the third month, change the **Contact Volume** entry to 15,000. Once again, Strategic Planning copies the result into the future. You can stop that by entering 10,000 in the following month.

Sales (SL) : Voice, service goal = 90% in 30 seconds						
	Oct	Nov	Dec	Jan	Feb	Mar
Contact volume	10,000	10,000	10,000	10,000	10,000	10,000
AHT	300	300	300	300	300	300
Service level	0	0	0	0	0	0
Required FTEs	0	0	0	0	0	0
Over/Under FTEs	0	0	0	0	0	0

Right-click in any available row to graph, copy, or paste the row, or to set a simple or compound growth factor for the row's values.



The growth factor allows you to specify a percentage to be used as a growth factor (or compound growth factor, which is dependent on the data of the previous month) to be applied to AHT or Contact Volume. You can specify that this growth factor is to be applied to all months of the scenario, a single month, or a specified range of months in the scenario



- 8 **Run the simulator.** In general, you specify values in the white rows, which are displayed in green, and Strategic Planning computes the light blue rows for you. Select **Scenario..Simulate** and Strategic Planning will compute **Required FTEs** and **Over/under FTEs** for you. The numbers are displayed in red because they are new.

Sales (SL): Voice, service goal = 90% in 30 seconds						
	Oct	Nov	Dec	Jan	Feb	Mar
Contact volume	10,000	10,000	10,000	10,000	10,000	10,000
AHT	300	300	300	300	300	300
Service level	0	0	0	0	0	0
Required FTEs	10.7	10.5	10.7	10.7	10.5	10.9
Over/Under FTEs	-10.7	-10.5	-10.7	-10.7	-10.5	-10.9

Note that the **Required FTEs** and **Over/under FTEs** are equal but opposite each other. This is because we have no hiring plan—no one is working! If we need 5 agents, we are exactly 5 agents understaffed.

As an exercise, enter **Contact volume** and **AHT** values for the second queue and run the simulator again.

- 9 **Add agents for the Sales queue.** Take a look at the **Service Level** row for the Sales queue. It predicts a service level of 0 since there are no agents and, so, no calls are answered. Let's do a simple experiment in which we add some agents and see how this affects the Service level and the understaffing.

In the middle pane (the Staffing Profiles pane), there is a single profile right now, called **Staffing Profile #1**. In parentheses, it

shows the queues that, by default, this profile works, indicating just the Sales queue (**SL** is the abbreviation we chose). In the **Hires** row, specify 9 hires in the first month. Note that Strategic Planning assumes you want 9 hires every month. Enter 0 in the second month to cancel this. Now, headcount stays at 9 throughout the scenario. Look in the **Totals** pane below and it, too, shows total contact center headcount at 9. The **Cost** rows also show cost estimates now, using default wage and overhead values. We will look at costing in detail in Task IV.

Staffing Profile #1 (SL) : Shrinkage = 8%, Agent hours/four weeks = 168, Initial headcount=8						
	Oct	Nov	Dec	Jan	Feb	Mar
Hires	9	0	0	0	0	0
In training	0	0	0	0	0	0
Attrition	0	0	0	0	0	0
Attrition %	0	0	0	0	0	0
Overtime hours	0	0	0	0	0	0
Headcount	9	9	9	9	9	9
Effective headcount	9	9	9	9	9	9
Occupancy	0	0	0	0	0	0

Totals						
	Oct	Nov	Dec	Jan	Feb	Mar
Contact volume	10,000	10,000	10,000	10,000	10,000	10,000
Hires	9	0	0	0	0	0
Headcount	9	9	9	9	9	9
One-time cost	0	0	0	0	0	0
Total cost	15,120	15,840	15,560	15,120	14,400	15,560
Cumulative cost	15,120	30,960	47,520	62,640	77,040	93,600

Select **Scenario..Simulate** again and note that the **Service Level** row for the Sales queue comes to life, and that the understaffing decreases significantly in all months.

Sales (SL) : Voice, service goal = 90% in 30 seconds						
	Oct	Nov	Dec	Jan	Feb	Mar
Contact volume	10,000	10,000	10,000	10,000	10,000	10,000
AHT	300	300	300	300	300	300
Service level	81	77	81	81	77	87
Required FTEs	10.7	10.5	10.7	10.7	10.5	10.8
Over/Under FTEs	-1.2	-1.5	-1.2	-1.2	-1.5	-0.6

Staffing Profile #1 (SL) : Shrinkage = 8%, Agent hours/four weeks = 168, Initial headcount=8						
	Oct	Nov	Dec	Jan	Feb	Mar
Hires	9	0	0	0	0	0
In training	0	0	0	0	0	0
Attrition	0	0	0	0	0	0
Attrition %	0	0	0	0	0	0
Overtime hours	0	0	0	0	0	0
Headcount	9	9	9	9	9	9
Effective headcount	9	9	9	9	9	9
Occupancy	58	58	58	58	58	51

## Task 3: Evaluating cross-skilled staffing

**Purpose:** In this task we will create a simple cross-skilled scenario to show how to evaluate a situation in which agents are working different skills in different sets of queues.

- 1 **Set up queues.** Start with the scenario you created in Task II. For the Sales queue, specify a monthly contact volume of 80,000 and an AHT of 300 across the row—you will have to change the contact volume in a number of places to make sure all the rows are consistent. For the Service queue, specify a monthly contact volume of 40,000 and an AHT of 400 every month.



We are assuming that each month has an even number of calls. Of course, real months vary since there are different number of workdays in different months. This simplification is useful only for this training task and should not be made in real life.

Queue #1 (Q1) : Voice, service goal = 90% in 30 seconds						
	Oct	Nov	Dec	Jan	Feb	Mar
Contact volume	80,000	80,000	80,000	80,000	80,000	80,000
AHT	300	300	300	300	300	300
Service level	0	0	0	0	0	0
Required FTEs	0	0	0	0	0	0
Over/Under FTEs	0	0	0	0	0	0

Service (SVC) : Voice, service goal = 80% in 30 seconds						
	Oct	Nov	Dec	Jan	Feb	Mar
Contact volume	40,000	40,000	40,000	40,000	40,000	40,000
AHT	400	400	400	400	400	400
Service level	0	0	0	0	0	0
Required FTEs	0	0	0	0	0	0
Over/Under FTEs	0	0	0	0	0	0

- 2 **View queue-specific agent needs.** Let's begin by simulating to see what the overall needs are on each queue. Select **Scenario..Simulate** again and examine the **Required FTEs** row. You will need more than 40 dedicated FTEs worth of work, after shrinkage, on each queue.

Queue #1 (Q1) : Voice, service goal = 90% in 30 seconds						
	Oct	Nov	Dec	Jan	Feb	Mar
Contact volume	80,000	80,000	80,000	80,000	80,000	80,000
AHT	300	300	300	300	300	300
Service level	0	0	0	0	0	0
Required FTEs	58.6	58.2	58.6	58.6	58.2	59.2
Over/Under FTEs	-58.6	-58.2	-58.6	-58.6	-58.2	-59.2

Service (SVC) : Voice, service goal = 80% in 30 seconds						
	Oct	Nov	Dec	Jan	Feb	Mar
Contact volume	40,000	40,000	40,000	40,000	40,000	40,000
AHT	400	400	400	400	400	400
Service level	0	0	0	0	0	0
Required FTEs	41.5	41.2	41.5	41.5	41.2	42
Over/Under FTEs	-41.5	-41.2	-41.5	-41.5	-41.2	-42

- 3 **Specify staffing profile details.** We are now ready to define a staffing profile more completely. For this example we will use

two staffing profiles, but let's begin by learning more about all the details associated with a staffing profile. Select **Staffing Profiles..Edit..Profile #1**. Just as the **Edit Queue** window showed detailed information associated with a particular queue, so the **Edit Profile** window shows the detail associated with a particular staffing profile.

Change the profile name to **Sales Only Agents**, and choose something appropriate for the abbreviation.

**Agent paid hours/four weeks** is a very important field, used to specify how many hours agents of this staffing profile are paid to work. A part-time staffing profile, for example, would have a significantly different value. Specify the paid hours/four weeks in terms of a 28 day month. Strategic Planning will compensate for the actual number of business days in each actual month in the scenario. For our example, use 160 paid hrs/month.

The **Hourly wage** field is important for costing purposes. Note that this is specified individually for each staffing profile, which allows more accurate costing. The wage should be unburdened wage, since there is a separate cost page where you will be able to compute both shrinkage and, later, burden or overhead.

If you wish to enter overtime plans into Strategic Planning, use the **Overtime burdened cost/hr** field to enter the fully burdened cost of each overtime hour of work for this staffing profile. Note that, unlike Hourly Wage, this field is burdened (because the overhead on overtime can vary dramatically from regular hours' overhead).

**Initial agent headcount** allows you to specify headcount going into the scenario. For this example, keep the initial agent headcount at zero.

An important quality of Strategic Planning is that it can handle both multi-skilled and multi-media scenarios. The lower region of the **Edit Staffing Profile** window allows you to choose which queues are worked by agents in this staffing profile. Select queues that the agents work by highlighting them from the list of all queues on the left and adding them to the queues to the right. In this case, we want the Sales Only agents to only work the

Sales queue, of course, so ensure that you have only the Sales queue in the right.

Note that there is a greyed out selector, **Task switching**, below **Blended** near the bottom of the window. In case you have agents working both immediate (voice) and deferred (email) queues, this selection becomes active, allowing you to choose between blended mode, in which the agents handle both types of queues at all times, and task switching mode, in which case the agents are allotted specific times of day to handle only the deferred queues. In the blended mode, we assume that all immediate queues take priority over deferred queues, so work on deferred queues is only performed during idle time with respect to the immediate queues' demands. In the task switching mode, you can specify, on the line below the selector, the percentage of time agents will spend on the deferred queues. Strategic Planning can then visualize for you the quality of service impact on all queues, letting you fine-tune your task-switching policy to maximize efficiency. In this example, since Sales and Service are both voice queues, this selection area is not active.

**Edit Staffing Profile**

General    Hire/Transfer    Holidays    Savings

Starting profile name: Sales Only Agents  
Starting profile abbreviation: SOA  
Agent paid hours/four weeks: 160  
Hourly wage: 10.00  
Overtime burdened cost/hr: 0.00  
Initial agent headcount: 0

All queues: Sales, Service  
Queues for this profile: Sales

Blended (selected)    Task switching (disabled)  
Handle deferred queues for 25 % of contact time

Set    Cancel



4 **Specify Hire/Transfer options.** Click the **Hire/Transfer** tab.

The **Select staffing options** checkboxes let you choose the type of hiring and transfers that this staffing profile's agents use. In this case, we wish these agents to be directly hired, rather than trained from existing staffing profiles. Therefore, we select the **Can hire into this staffing profile** checkbox and not the **Can transfer into this staffing profile** checkbox. Strategic Planning lets you specify how many weeks the training takes, in whole numbers. During the period of training, Strategic Planning calculates the productivity linearly over the specified number of weeks; partial productivity is calculated as a partial contribution to the FTE's pool. Note that productivity in the final week of training must finish at 100%. If you select **Can transfer into...**, you will see an additional line where you can specify the training time for existing agents who train into this staffing profile. Although not applicable to this Sales Only profile, go ahead and temporarily select **Can transfer into...** to see this line, then uncheck the box.

Select the **Can transfer out of this staffing profile** checkbox as well because agents in this profile agents can be further trained, and then moved to a more skilled, cross-trained staffing profile.

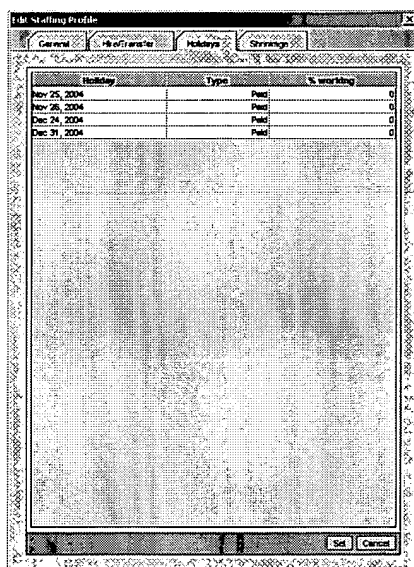
The screenshot shows the 'Edit Staffing Profile' dialog box with the 'Hire/Transfer' tab selected. The 'Select staffing options' section has three checkboxes: 'Can hire into this staffing profile' (checked), 'Can transfer into this staffing profile' (unchecked), and 'Can transfer out of this staffing profile' (checked). Below this, the 'New Agents' section has a 'Number of weeks required for full productivity of newly hired agents' set to 0. The 'Percent Productivity vs. Number of weeks' graph for new agents is empty. The 'Transferred Agents' section also has a 'Number of weeks required for full productivity of transferred agents' set to 0, with an empty graph. At the bottom are 'Set' and 'Cancel' buttons.

5 **Specify Holiday Types.** Select the **Holidays** tab. Each holiday you set in the scenario properties is listed.

**Type:** Holidays in Strategic Planning can be one of three types:

- **Paid**—Employees receive paid time off. The total cost for the employees remains the same and the hours that they would have worked that day are counted towards their hours for the week, but those hours don't count towards staffing hours on a queue.
- **Unpaid - same total hours**—Employees do not work that day, but the hours the employees would have worked are scheduled for another day during that week. The cost for these employees remains the same and the staffing hours for that day are reduced, although the staffing hours for the week remain the same.
- **Unpaid - reduced total hours**—Employees do not work that day and do not get paid for that day. The cost for the employees for that week is reduced by one day's pay, and the staffing hours are reduced as well.

**Percent Working:** The percentage of people who are working that day despite the fact that it is a holiday. That percent of the people will work as they normally would have, and will get paid as they normally would.



- 6 **Specify staffing profile Shrinkage Properties.** Select the **Shrinkage** tab of the **Edit Staffing Profile** window. The default setting lets you apply a single shrinkage breakdown that will be applied to all months of the scenario (**Specify shrinkage for entire scenario**). Otherwise, **Specify shrinkage per month**

creates an additional row in the Staffing Profile grid so that a monthly shrinkage value can be specified manually.

Specification of appropriate shrinkage values is critical in estimating staff performance. Breaking down shrinkage as shown in this window allows more accurate cost estimation than is otherwise possible.

It is important to note that the shrinkage percentages entered in this window are added up to yield a total shrinkage percentage. Be sure that each percentage you enter is a shrinkage percentage of the total paid hours. When you have entered your numbers, check your work by examining **Hours/month after shrinkage**—the effective contact time your agents have, per month, taking into account all shrinkage and absenteeism. Ensure that this value is what you intend it to be.

Let's do an example now. Suppose that your agents are paid for 160 hours of work per 28-day month, nominally. Each day, they are given 5 hours to spend on the contact center, with other duties taking up the remaining 3 hours. During their 5 hours on-contact, you have noted a miscellaneous shrinkage (bathroom, water fountain, etc.) of 10%. Also, the agents are given two 15-minute paid breaks during these 5 hours. We enter numbers as follows:

Category	Percentage
Planned shrinkage	
Paid vacation	0%
Breaks	6.3%
Training	0%
Non-contact activity	37.5%
Other planned shrinkage	6.3%
Total planned shrinkage	50.1%
Unpaid absenteeism	
Unpaid sick/personal	0%
Unpaid other	0%
Total unpaid absenteeism	0%
Paid absenteeism	
Paid Jury/FMLA	0%
Paid other	0%
Total paid absenteeism	0%
Total shrinkage	50.1%
Hours/month after shrinkage	80

In the **Shrinkage** tab, in the **Breaks** field, we compute the percentage of their total time in breaks. On a daily basis, this is  $0.5/8 = 6.25\%$ . Strategic Planning lets you enter percentages in one-tenth percent increments, so enter 6.3 in the **Breaks** field. In **Non-contact Activity** we will capture the fact that 3 out of every 8 hour shift is taken up with non-contact duties. So, enter  $3/8 = 37.5\%$ .

Finally, we will use the **Other Planned Shrinkage** field to capture the fact that, during their on-contact time, we have measured a 10% miscellaneous shrinkage. But this 10% is in relation to the 5 contact center hours, and therefore is not a percentage of **Agent Hours per Month**! Therefore, we have to adjust it to be a percentage of the total hours:  $(10\% * 5) / 8 = 6.25\%$ . Therefore, in **Other Planned Shrinkage** we enter 6.3%.

At the bottom, you can see that the Total shrinkage is now 50.1%. Below that, note that the Hours/month after shrinkage is 80. This means that, although we pay agents for 160 hours of work per/month, they effectively perform contact center duties for 80 hours/month, post-shrinkage. Ordinarily, of course, we would also have specified some unpaid and paid absenteeism as

well, further reducing this value. For this example, however, we will proceed with 0 in those fields.

Click **Set** to return to the main window.

- 7 **Create a second staffing profile.** The scenario we are constructing has a total of two staffing profiles: One consists of agents who work in just the Sales queue. The second consists of agents who have received further training and are cross-skilled to handle both Sales and Service calls. A new scenario comes with one queue and one staffing profile. We already have two queues for this example, and we also need two staffing profiles for this task. First, remove the 9 hires in the Staffing Profile if they remain from the previous training task.

To create the second staffing profile, select **Staffing Profiles..Create New Staffing Profile**. To save time and avoid entering the shrinkage parameters once again, select **Copy this staffing profile's values**, then select **Sales Only Agents** and click **Set**. **Edit Staffing Profile** pops up and you can check the **Shrinkage** tab to see that, indeed, the shrinkage values have been copied.

If the cross-skilled agents have different shrinkage values, for example, a larger amount of time monthly devoted to training, this is the time to specify that in the shrinkage window. For now, let's assume the shrinkage parameters are the same.

Return to the **General** tab. Change the name of this staffing profile to **Cross-Skilled, Sales+Service** and invent an appropriate abbreviation.

Since these agents are more skilled, specify a slightly higher wage, say 10.75 and, once again, keep **Initial agent headcount** at zero.

Now, add Service to their list of queues, identifying that the Cross-Skilled agents will work both the Sales and Service queues.

Move to the **Hire/Transfer** tab. Deselect **Can hire into this staffing profile** and instead select **Can transfer into this staffing profile**. For simplicity, specify a value of 0 for **Number of weeks required for full productivity of transferred agents**, even though this is unrealistic.

Click **Set** to return to Strategic Planning's main scenario screen.

- 8 **Try a staffing plan.** Let's review our staffing needs. Looking at Required FTEs on each queue, we need more than 42 FTEs on each queue. Of course, recall that we specified as our FTE divisor 160 staff hours per FTE. You can check this by going to the details of the Sales queue, for example. So, 42 FTEs post-shrinkage is really like 84 or so agents pre-shrinkage.

Let's try a simple cross-skilling example. Go to the Sales Only Agents details (using **Staffing Profiles..Edit..Sales Only Agents**) and specify **Initial Headcount** to be 20. Do the same for Cross-Skilled, specifying initial headcount to be 145.

Now select **Scenario..Simulate** and note the predicted performance of the Sales and Service queues. Staffing levels vary throughout the months since we have made the call volumes artificially flat. Note the Service level rows, which provide quantifiable estimates of service level throughout the scenario, as compared to the service level goals.

Sales (SL): Voice, service goal = 80% in 30 seconds						
	Oct	Nov	Dec	Jan	Feb	Mar
Contact volume	80,000	80,000	80,000	80,000	80,000	80,000
AHT	300	300	300	300	300	300
Service level	83	70	84	83	69	94
Required FTEs	58.6	58.2	58.6	58.0	58.2	59.2
Over/Under FTEs	-2.3	-4.2	-2.1	-2.3	-4.4	-1.5

Service (SVC): Voice, service goal = 80% in 30 seconds						
	Oct	Nov	Dec	Jan	Feb	Mar
Contact volume	40,000	40,000	40,000	40,000	40,000	40,000
AHT	400	400	400	400	400	400
Service level	49	20	50	49	17	65
Required FTEs	41.5	41.2	41.5	41.5	41.2	42
Over/Under FTEs	-6.1	-7.5	-5.9	-6.1	-7.0	-1.8

Now we can quantify the advantages of additional cross-skilling. Look at month 6, March. Sales is slightly overstaffed and Service is slightly understaffed. Now try transferring all 20 people from the Sales Only profile to the cross-skilled profile in February. Enter 20 in the Sales Only **Transfer Out** field and 20 in the Cross-Skilled **Transfer In** field. Select **Scenario...Simulate** and notice the improvement in the staffing, especially in the Service queue.

Sales (SL): Voice, service goal = 80% in 30 seconds						
	Oct	Nov	Dec	Jan	Feb	Mar
Contact volume	80,000	80,000	80,000	80,000	80,000	80,000
AHT	300	300	300	300	300	300
Service level	83	70	84	83	93	93
Required FTEs	58.6	58.2	58.6	58.8	58.2	58.2
Over/Under FTEs	-2.3	-4.2	-2.1	-2.3	0.8	7.5

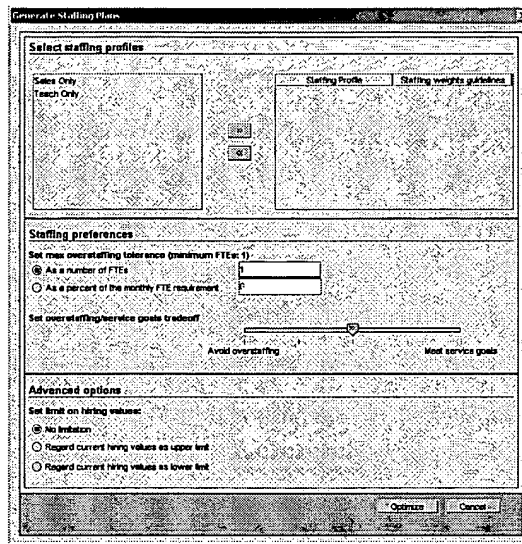
  

Service (SVC): Voice, service goal = 80% in 30 seconds						
	Oct	Nov	Dec	Jan	Feb	Mar
Contact volume	40,000	40,000	40,000	40,000	40,000	40,000
AHT	400	400	400	400	400	400
Service level	49	20	50	49	81	98
Required FTEs	41.5	41.2	41.5	41.5	41.2	42
Over/Under FTEs	-6.1	-7.5	-5.9	-6.1	-2.4	-4.5

## Task 4: Optimizing Staffing Plans

**Purpose:** In this task we will give you a high-level outline of the steps necessary to optimize a staffing plan.

- 1 **Define all parameters.** Specify the parameters for the scenario (operating hours, etc.), queues (contact volumes, etc.), and profiles (attrition, transfers, overtime), in the main window. Profile parameters, other than hiring, will stay fixed during the optimization.
- 2 Open the optimization dialog by clicking on **Scenario...Optimize**.



- 3 **Select the profiles to optimize.** The top left list contains all profiles that can be hired into. To select a profile, highlight its name on the list and click the right-arrow button.

Another way to select a profile for optimization is to click the **Hiring** row in the Profile's main window. If you click this row, a red flag appears, indicating that this row is flagged for optimization. Another click will remove the flag.

After you add a profile, you will see it appearing in the top right table. Attached to each selected profile are *Staffing weights guidelines*. These guidelines are your preferred weights for staffing for this profile, in comparison to the other selected profiles. These guideline weights serve as a guide in choosing the best plan that is closest to this preference. Note that the final plan may have different staffing guidelines because no closer ratios were available. The default guideline weight is 1. If more than one profile is selected for optimization, you can change these guideline weights, giving one or more profiles more weight.

- 4 **Set Staffing preferences.** In the middle pane, an option slider offers five increments, ranging from **Meet service goals** to **Avoid overstaffing**, where:
  - **Meet service goals** produces the best plan to meet the service goal. This plan gives a good idea on how many agents will be needed to meet the goal, and what would be the resulting overstaffing.



- **Avoid overstaffing** produces the best plan that keeps overstaffing below the set tolerance. In the middle pane, you can define a maximum overstaffing tolerance as a fixed number of FTEs or as a percent of the monthly FTE requirement. If you have already run the **Meet the service goals** plan, you will have a good idea about the maximum overstaffing needed to meet your goals, which may assist you in coming up with your tolerance.

Use the three increments between these two extremes to refine the plans and weight both your desire to meet the goal and avoid overstaffing.

- 5 **Set advanced options.** If you would like to limit hiring, input your bounds in the hiring row in the main window. Then, choose a constraint from the following options:
  - **Regard current hiring values as upper limit:** The system will not exceed the number that is already entered for each month.
  - **Regard current hiring values as lower limit:** The system will not go lower than the number that is already entered for each month.
- 6 **Optimize.** Click **Set**. You will see a progress bar while the system is finding the best plan for you. Once optimization is done, the new values are entered into the hiring row of each selected profile, and the results of the simulation are shown in the main window.

## Task 5: Configuring cost estimates

**Purpose:** *In this task, we show simple cost estimation to compare the cost of several possible plans.*

- 1 **Set up a new scenario.** Select **File..New** to create a new scenario from scratch. We will keep this scenario simple and just use defaults in order to concentrate on the costing parameters. Click **Set** to exit from the Properties window. Select **Views..Budgeting** to display a good, compact set of rows for this task.

Queue #1 (Q1): Voice, service goal = 90% in 30 seconds												
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	0	0	0	0	0	0	0	0	0	0	0	0
AHT	0	0	0	0	0	0	0	0	0	0	0	0
Required FTEs	0	0	0	0	0	0	0	0	0	0	0	0
Over/Under FTEs	0	0	0	0	0	0	0	0	0	0	0	0
Total revenue	0	0	0	0	0	0	0	0	0	0	0	0

Staffing Profile #1 (Q1): Shrinkage = 0%, Agent hours/four weeks = 160, Initial headcount=4												
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Hires	0	0	0	0	0	0	0	0	0	0	0	0
Attrition	0	0	0	0	0	0	0	0	0	0	0	0
Attrition %	0	0	0	0	0	0	0	0	0	0	0	0
Overtime hours	0	0	0	0	0	0	0	0	0	0	0	0
Headcount	0	0	0	0	0	0	0	0	0	0	0	0
Effective headcount	0	0	0	0	0	0	0	0	0	0	0	0

Totals												
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	0	0	0	0	0	0	0	0	0	0	0	0
Hires	0	0	0	0	0	0	0	0	0	0	0	0
Headcount	0	0	0	0	0	0	0	0	0	0	0	0
Overtime hours	0	0	0	0	0	0	0	0	0	0	0	0
Overtime cost	0	0	0	0	0	0	0	0	0	0	0	0
Staff cost	0	0	0	0	0	0	0	0	0	0	0	0
One-time cost	0	0	0	0	0	0	0	0	0	0	0	0
Total cost	0	0	0	0	0	0	0	0	0	0	0	0
Cost/Call	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative cost	0	0	0	0	0	0	0	0	0	0	0	0
Total revenue	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative revenue	0	0	0	0	0	0	0	0	0	0	0	0

- 2 **Specify Staffing Profile wage.** Another way to open **Edit Staffing Profile** is to click on the Staffing Profile's name just above its grid. Do so to open the **Edit Staffing Profile** window. Near the top of the **General** tab screen is **Hourly wage**. The default is \$10/hr, as shown. Set this to a realistic value for an agent group. Another important value in this tab is **Agent paid hours/four weeks**. This should be set to the approximate number of work hours (before shrinkage) per 28 day period for an agent of this staffing profile. Specific months have different numbers of workdays based on how many days there are in the month and where the weekends fall. Strategic Planning compensates for that, so when you specify a number, use the standard 20 weekday (or 4 week) month as your model.

**Edit Staffing Profile**

General   Hire/Transfer   Holidays   **Shrinkage**

Staffing profile name	Staffing Profile #1
Staffing profile abbreviation	P1
Agent paid hours/week	160
Hourly wage	15.00
Overtime burdened cost	0.00
Initial agent headcount	0

All queues

Queue #1

Queues for this profile

Queue #1

☐ Rendezvous
 ☐ Task switching

☐ Handle deferred queues for 25 % of contact time

Set Cancel

- 3 **Specify Staffing Profile shrinkage.** Now select the **Shrinkage** tab. In general, you should specify these values in the **Specify shrinkage for entire scenario** mode. This way, you need only compute the values once here and they will be used for every month of the scenario. Note that these shrinkage values are specific to this particular staffing profile. This enables you to reflect actual differences in shrinkage and absenteeism between various agent groups accurately. Refer to Task 3 for details and an example relating to entering **Shrinkage** values. For this example, enter several values in **Shrinkage** fields so that **Total Shrinkage** adds up to 25%, then click **Set**. Note at the bottom of the window that 25% shrinkage creates **Hours of work after shrinkage** (effective work time) of 120 hours, which is 75% of 160.

**Edit Staffing Profile**

General Hire/Transfer Holidays **Shrinkage**

☐ Specify shrinkage per month  
☒ Specify shrinkage for entire scenario

Planned shrinkage

Paid vacation	0%
Breaks	5%
Training	10%
Non-contact activity	10%
Other planned shrinkage	0%
<b>Total planned shrinkage</b>	<b>25%</b>

Unpaid absenteeism

Unpaid sick/personal	0%
Unpaid other	0%
<b>Total unpaid absenteeism</b>	<b>0%</b>

Paid absenteeism

Paid Jury/FMLA	0%
Paid other	0%
<b>Total paid absenteeism</b>	<b>0%</b>

**Total shrinkage** 25%

**Hours/month after shrinkage** 1.25

Set Cancel

Click **Set** to close the window.

- 4 **Examine Cost Parameters.** Select **Scenario..Cost Calculation**. Three tabs in this location provide summary cost information. The first tab, **Average Wage**, lists the average non-overtime wage and average overtime wage you have specified for each staffing profile. Since we have only one staffing profile in this example, there is only one row. The wages can be edited directly on this window, enabling several staffing profiles' wages to be changed easily.

**Cost Calculation**

Average Wage Burden Summary

Staffing profile	Average Non-Overtime Wage	Average Overtime Wage
Staffing Profile #1	15	0

Set Cancel

The second tab, **Burden**, requires you to fill in overhead/burden costs that are generally applicable to all agents and non-

overtime wages. This is a good place to specify the overhead as shown and, further, to enable any variable costs to be figured into the costing as you wish. For this task, specify 30% burden in the **Other** column.

The screenshot shows the 'Cost Calculation' dialog box with the 'Burden' tab selected. On the left, there is a list of cost categories with percentage input fields: 421K Pension (0%), Insurance (0%), Worker's Comp (0%), FUTA (0%), Bonus (0%), and Other (30%). Below these is a 'Total' field showing '30 % of salary'. The 'Set' and 'Cancel' buttons are at the bottom right.

Now click on the third tab, **Summary**. This Summary section provides several useful values for each staffing profile. The **Pay Ratio** column computes and displays the number of hours an agent is paid for each effective hour of work done by an agent. This number will always be larger than 1.0 because of absenteeism, provided that shrinkage has been defined. (Otherwise, by default, shrinkage is 0% and the pay ratio is 1). **Total Burden** is the proportion of the burden an agent carries. **Cost/Sched Hr.** specifies the effective cost of each scheduled hour of work, and **Cost/Agent/4 Wks** computes the effective cost of 4 weeks for a single agent. **Cost w/Overtime** computes the effective cost of four weeks for a single agent with overtime factored in. Now click **Set** to return to the main screen.

The screenshot shows the 'Cost Calculation' dialog box with the 'Summary' tab selected. It displays a table with the following data:

Staffing profile	Avg. Wages	Avg. Overtime Wages	Total Burden	Pay Ratio	Cost/Sched Hr.	Cost/Agent/4 Wks	Cost w/Overtime
Starting Profile #1	15.00	0.00	1.3	1.33	28.00	4,160.00	4,160.00

The 'Set' and 'Cancel' buttons are at the bottom right.

- 5 **Create two scenarios to compare.** One powerful feature of Strategic Planning is that any number of scenarios can be open

at once. This allows you to flip back and forth between two scenarios that capture a what-if you are considering. To do this, first save the current scenario using **File..Save As**. Provide an easy name such as **tutorial4**. Now we can open a second copy of this scenario. Select **File..Open** then select **tutorial4** and click **Open**.

Note that Strategic Planning now has two tabbed screens. If the tabs are on top of one-another instead of side-by-side, you can make your Strategic Planning window wider to give it more room. Both of these scenarios have the same name now. If you intend to do work on both copies and save both, you should rename one. Let's do that for the right tab. Go to **File..Save As..** and save this scenario with a different name. That way, you have two separate copies now. But remember that you changed the **Hourly wage**, the **Shrinkage** and the **Burden** before duplicating the scenario. So, both of these scenarios have the values that you specified. As an exercise, check this.

The screenshot shows the Strategic Planning software interface with three panes. The top pane is titled 'Queue #1 (07): Voice services goal = 97% in 28 seconds'. It contains a table with columns for months (Feb to Jan) and rows for Contact volume, AHT, Required FTEs, and Overhead FTEs. The middle pane is titled 'Staffing Profile #1 (01): Shrinkage = 25%, Agent headcount = 168, Initial headcount = 0'. It contains a table with columns for months (Feb to Jan) and rows for Hire, Attrition, Attrition % (0.00), Overtime hours, Headcount, and Effective headcount. The bottom pane is titled 'Totals' and contains a table with columns for months (Feb to Jan) and rows for Contact volume, Hire, Attrition, Headcount, Overtime hours, Overtime cost, Staff cost, One-time cost, Total cost, Cost/Call, Cumulative cost, Total revenue, and Cumulative revenue.

	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	0	0	0	0	0	0	0	0	0	0	0	0
AHT	0	0	0	0	0	0	0	0	0	0	0	0
Required FTEs	0	0	0	0	0	0	0	0	0	0	0	0
Overhead FTEs	0	0	0	0	0	0	0	0	0	0	0	0

	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Hire	0	0	0	0	0	0	0	0	0	0	0	0
Attrition	0	0	0	0	0	0	0	0	0	0	0	0
Attrition %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Overtime hours	0	0	0	0	0	0	0	0	0	0	0	0
Headcount	0	0	0	0	0	0	0	0	0	0	0	0
Effective headcount	0	0	0	0	0	0	0	0	0	0	0	0

	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	0	0	0	0	0	0	0	0	0	0	0	0
Hire	0	0	0	0	0	0	0	0	0	0	0	0
Attrition	0	0	0	0	0	0	0	0	0	0	0	0
Headcount	0	0	0	0	0	0	0	0	0	0	0	0
Overtime hours	0	0	0	0	0	0	0	0	0	0	0	0
Overtime cost	0	0	0	0	0	0	0	0	0	0	0	0
Staff cost	0	0	0	0	0	0	0	0	0	0	0	0
One-time cost	0	0	0	0	0	0	0	0	0	0	0	0
Total cost	0	0	0	0	0	0	0	0	0	0	0	0
Cost/Call	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative cost	0	0	0	0	0	0	0	0	0	0	0	0
Total revenue	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative revenue	0	0	0	0	0	0	0	0	0	0	0	0

- Hire agents and view cost impact.** Now let's demonstrate how Strategic Planning visualizes cost as you make hiring decisions and other changes. Verify that you are once again in the **Budgeting** View and click on the left tab to view the original scenario. In the **Totals** pane at the bottom, three rows show

**One-time Cost, Total Cost and Cumulative Cost.** In **Staffing Profile #1**, enter 10 hires in the first month and then 0 in the second so that no further hiring in subsequent months takes place. Now note that headcount row remains at 10 for the duration of the scenario. Now let's examine the **Totals** pane at the bottom. Note that **Total Cost** varies slightly throughout the plan, since the number of working hours in each month varies. **Cumulative Cost** shows the total cost summed from plan inception. In the **One-time Cost** you may enter any additional cost (for example, fixed costs) and they will be summed appropriately. To show a simple comparison, now select the second scenario using the tab at the top. Note that it has no hires in **Staffing Profile #1**. Now specify in this scenario 8 hires in the first month, then 4 hires in the second month and 0 after that. The headcount row will go from 8 to 12 and then stay at 12. By flipping back and forth between the two scenarios using the top tabs, you can see the difference in monthly cost and the difference in cumulative cost between these hiring plans.

	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	0	0	0	0	0	0	0	0	0	0	0	0
AHT	0	0	0	0	0	0	0	0	0	0	0	0
Required FTEs	0	0	0	0	0	0	0	0	0	0	0	0
Over/Under FTEs	0	0	0	0	0	0	0	0	0	0	0	0

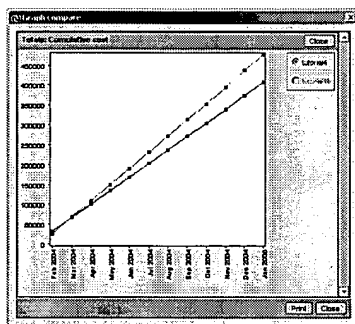
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Hires	0	4	0	0	0	0	0	0	0	0	0	0
Attrition	0	0	0	0	0	0	0	0	0	0	0	0
Attrition %	0	0	0	0	0	0	0	0	0	0	0	0
Overtime hours	0	0	0	0	0	0	0	0	0	0	0	0
Headcount	0	12	12	12	12	12	12	12	12	12	12	12
Effective headcount	0	12	12	12	12	12	12	12	12	12	12	12

	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	0	0	0	0	0	0	0	0	0	0	0	0
Hires	0	4	0	0	0	0	0	0	0	0	0	0
Headcount	0	12	12	12	12	12	12	12	12	12	12	12
Overtime hours	0	0	0	0	0	0	0	0	0	0	0	0
Over/Under cost	0	0	0	0	0	0	0	0	0	0	0	0
One-time cost	0	0	0	0	0	0	0	0	0	0	0	0
Total cost	24,900	43,056	41,104	39,212	41,104	41,104	41,104	41,104	39,212	41,104	43,056	39,212
Cost/Call	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative cost	24,900	68,016	109,120	148,332	189,436	230,540	271,644	312,748	353,852	394,956	436,060	477,164
Total revenue	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative revenue	0	0	0	0	0	0	0	0	0	0	0	0

- Graphing differences.** One feature that you can try is visually graphing the same row in two different scenarios that are open. In this case, let's graph the **Cumulative Cost** row in both scenarios and see how it compares. To do this, click on the **Graph** icon to the right of the **Totals** title. Now select **Cumulative cost** and leave both scenarios checked. Click **Set**

and the graph window opens. Resize the window to make it readable. Notice that the cost of the two scenarios diverges slightly. You can graph any row at all this way. When you graph rows that you ordinarily enter information on, such as the Contact Volume or AHT row, you can actually make adjustments directly in the graph, by grabbing the points and dragging them with your mouse.



- 8 Select **File..Print** from this window to print a copy of the graph.

## Task 6: Importing from the Workforce Optimization Suite Database

**Purpose:** *In this task we summarize how to import baseline contact volume, AHT and contact distribution data from the Witness Systems Workforce Optimization Suite database.*


**Overview.** Our import tool enables you to use historical data in order to generate more accurate forecasts. The import utility allows you to select from among any queue and any month of previous data stored in the Witness Systems Workforce Optimization Suite database. You can combine multiple ACD queues together, and you can also combine multiple months together. Data importing is done for both *Contact Volumes* and *AHT* as well as *Intra-day distributions* and *Intra-week distributions*. In all cases, imported data is used to create *baseline* values that may be viewed on the main queue grids and in distributions graphs.

The process of importing data includes:

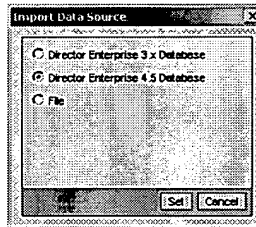
- 1 **Choosing a queue.** Contact volumes and distributions are all associated with each queue in Strategic Planning. Each Strategic Planning queue that you use may represent one ACD queue or a



group of ACD queues. In general, to simplify the planning process, group together ACD queues under a single Strategic Planning queue whenever possible. For this example, simply begin a new scenario (**File..New..**) and we will use **Queue #1** as the queue for which we want to import historical ACD data. First note that **Base contact volume** and **Base AHT** are zero. Next, go to the **Edit Queue** window and visit the Distribution tabs. Note that the distributions are completely flat; this is the default. Now click **Cancel** to return to the main screen.

- 2 **Launch the import utility.** After returning to the main screen, click on the Database Import icon  to the right of the Queue name to begin the import operation. (Alternatively, you can use the **Queues...Import** or **Queues...Import all Queues** menu items.)

The first window that appears allows you to specify whether you are importing data from Director Enterprise 3.x, Forecasting and Scheduling 7.6, or from a file.



## Importing From Forecasting and Scheduling

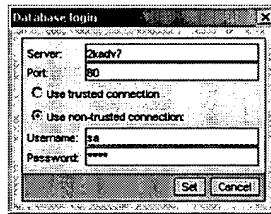
The following sequence of steps is the same, whether you are importing from a Director Enterprise 3.x or Forecasting and Scheduling 7.6 database:

- 1 Select the appropriate data source and click **Set**.



Do this only if your system is connected to the Witness Systems Workforce Optimization Suite database. Otherwise, the system will search unsuccessfully for the database for a minute.

The Database login window is displayed.

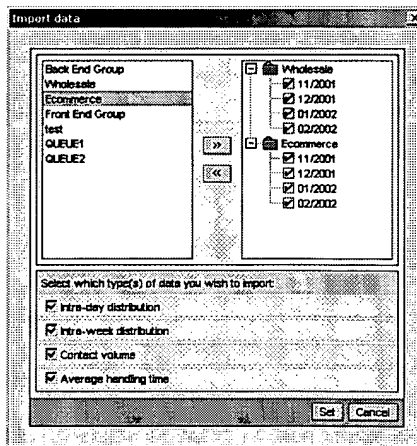


- 2 Specify the server and connection type. If you are using a non-trusted connection, specify a username giving you read-write access to the database, and the password associated with that user name, and click **Set**.



The system displays the following window as it imports data:




- 3 **Select import targets.** As shown in the next illustration, you can choose to import for **Intra-day Distribution**, **Intra-week Distribution**, **Contact Volume**, and **Average Handling Time**. The fact that you can selectively decide what to import allows you to use some queues for their distribution data while selectively using other database queues for their raw contact volumes—all for the *same* queue in Strategic Planning. For this example, as is the default, you should leave all boxes checked in the bottom half of this window.

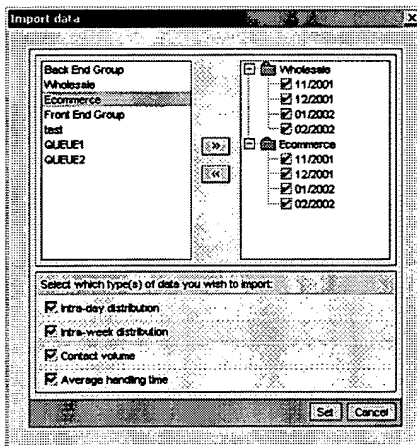


- 4 **Select queues.** As shown in the previous illustration, the importer allows you to combine data from as many months and queues as you like. It automatically displays only those months and queues that are available. For your Strategic Planning queue, you want to select Database queues that can together create the best forecast of future distributions and trends. For this example, pick only one or two queues. Select the queues,

then click the . Once you click  it takes several seconds while Strategic Planning explores the Witness Systems Workforce Optimization Suite database to identify all valid months of data. A progress bar is displayed.



- 5 **Select months.** In the window at the right, Strategic Planning displays all months with valid data, separately for each queue. In general, select a representative set of months. If you are importing distributions, you can import different months from different queues. But, when you import from different queues and the same months, contact volumes are added together. Therefore, take care when importing Contact volume to always select the same months for all queues. To select or un-select months, just check or un-check the box next to the month. Use the  button to remove an entire queue from the import list. For this example, select four or five months of data, making sure to cover some of the months that are in your Strategic Planning scenario.



- 6 **Automatic calculation.** Once you click **Set**, the system takes every 15-minute unit of data and conducts significant data fusion, computing weighted averages to produce distribution data as well as average contact volume for each month. A progress bar is displayed. This process takes time but, when complete, returns control to the Strategic Planning main screen, where we can view the resulting data.
- 7 **Examine results in Strategic Planning.** The best way to verify successful importing is to enter **Edit Queue** for the target queue and click on the distributions tabs to see the result of the data import and automatic mining process. Then return to the

main screen, and note that Base contact volume and Base AHT contain the original, imported data, and it has also been copied to Contact volume and AHT. As you make changes here and in the distributions graphs, the baseline will always be available for comparison.

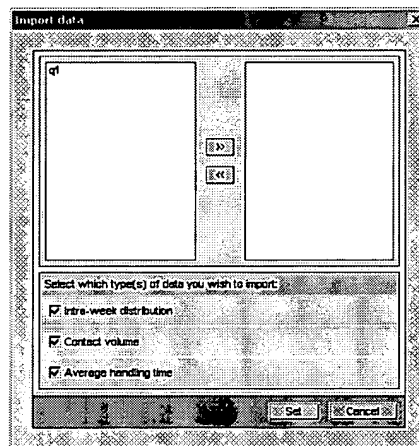
## Importing From a File

To import data from a file:



- 1 Select **File** and click **Set**.

A file browser window opens, allowing you to navigate to and select the .txt or .csv (comma-separated values) file you want to import.


- 2 Select the file and click **OK**
- 3 **Select import targets.** As shown in the next illustration, you can choose to import for **Intra-week Distribution**, **Contact Volume**, and **Average Handling Time**. The fact that you can selectively decide what to import allows you to use some queues for their distribution data while selectively using other database queues for their raw contact volumes—all for the *same* queue in Strategic Planning. For this example, as is the default, you should leave all boxes checked in the bottom half of this window.

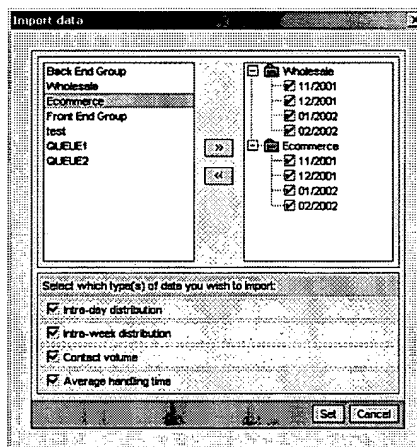


- 4 **Select queues.** As shown in the previous illustration, the importer allows you to combine data from as many months and queues as you like. It automatically displays only those months and queues that are available. For your Strategic Planning queue, you want to select Database queues that can together create the best forecast of future distributions and trends. For

this example, pick only one or two queues. Select the queues, then click . Once you click  it takes several seconds while Strategic Planning explores the Witness Systems Workforce Optimization Suite database to identify all valid months of data. A progress bar is displayed.

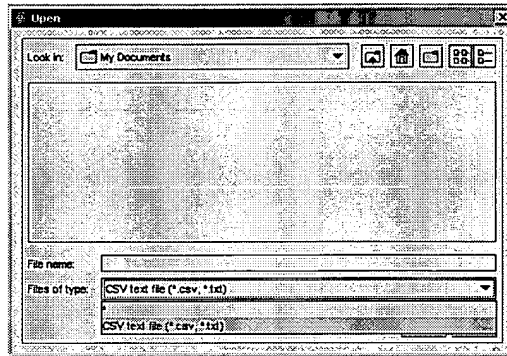


- 5 **Select months.** In the window at the right, Strategic Planning displays all months with valid data, separately for each queue. In general, select a representative set of months. If you are importing distributions, you can import different months from different queues. But, when you import from different queues and the same months, contact volumes are added together. Therefore, take care when importing Contact volume to always select the same months for all queues. To select or un-select months, just check or un-check the box next to the month. Use the  button to remove an entire queue from the import list. For this example, select four or five months of data, making sure to cover some of the months that are in your Strategic Planning scenario.



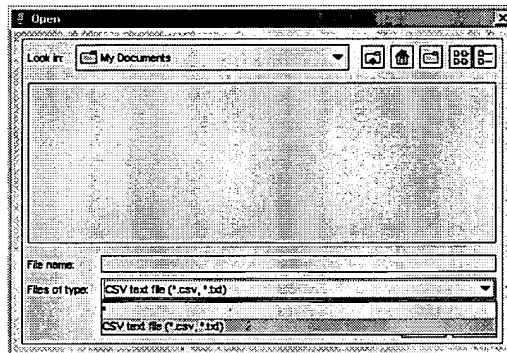
- 6 **Automatic calculation.** Once you click **Set**, the system takes every unit of data and conducts significant data fusion, computing weighted averages to produce distribution data as well as average contact volume for each month. A progress bar is displayed. This process takes time but, when complete, returns control to the Strategic Planning main screen, where we can view the resulting data.
- 7 **Examine results in Strategic Planning.** The best way to verify successful importing is to enter **Edit Queue** for the target queue and click on the distributions tabs to see the result of the

data import and automatic mining process. Then return to the main screen, and note that Base contact volume and Base AHT contain the original, imported data, and it has also been copied to Contact volume and AHT. As you make changes here and in the distributions graphs, the baseline will always be available for comparison.



### *Format of the Import File*

The file from which you import data needs to have its values separated by commas. The file extension can be either .csv or .txt.



Two examples are shown below, one for a single queue, the second for multiple queues:

### **Single Queue:**

```
q1,09-02,30000,180
q1,10-02,40000,180
q1,11-02,30000,180
q1,12-02,40000,180
q1,01-03,30000,180
q1,02-03,40000,180
q1,03-03,30000,180
```

### Multiple Queues:

q1,09-02,30000,180  
q1,10-02,40000,180  
q1,11-02,30000,180  
q1,12-02,40000,180  
q1,01-03,30000,180  
q1,02-03,40000,180  
q1,03-03,30000,180

q2,03-02,3000,170  
q2,04-02,4000,170  
q2,05-02,3000,170  
q2,06-02,4000,170  
q2,07-03,3000,170  
q2,08-03,4000,170  
q2,09-03,3000,170

For intra-week distribution information, you define dates that are single days and not months. For example:

q1,09-01-02,30000,180  
q1,09-08-02,15000,90  
q1,10-02,40000,180  
q1,11-02,30000,180  
q1,12-02,40000,180  
q1,01-03,30000,180  
q1,02-03,40000,180

Strategic Planning averages the contact volumes for each day. All Sundays in the week are averaged, then all Mondays, and so on. AHT is calculated as a weighted average of the contact volume.

## Importing from All Queues

The **Queues..Import all Queues** command allows you to import to more than a single queue. Imported queues are assigned to existing queues by name.

- 1 Select import targets. You can choose to import for **Intra-Day Distribution** (only from the Witness Systems Workforce Optimization Suite), **Intra-Week Distribution**, **Contact Volume**, and **Average Handling Time**.
- 2 Check the **Create queue if does not already exist** box to have imported queues that do not already exist automatically created.
- 3 Click **Set** to import the data. A progress bar appears.

## Task 7: Exporting to an Excel Report

**Purpose:** *In this task we lead you through the creation of an Strategic Planning Excel report, then provide a tour of the functionality and features of the report.*



You must have a copy of Microsoft Excel 2000 or Microsoft Excel 2002 (Office XP) installed on your system to export data for reports. You must enable Excel macros.

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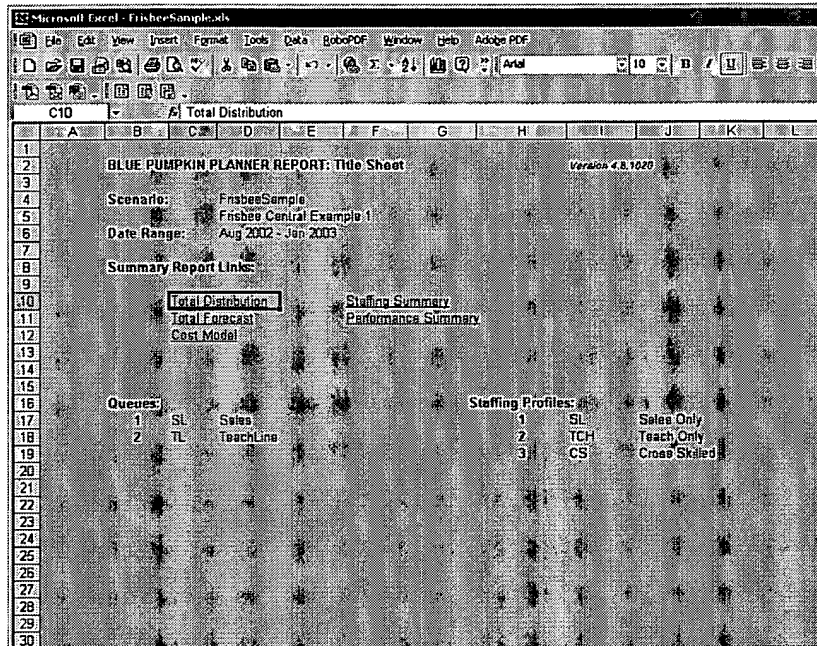
- 1 **Open the Tutorial example.** For this task, we need to open up a more sophisticated scenario so that we can create an Excel report that is rich enough to explore. From the **Examples** folder of Strategic Planning, open **FrisbeeSample.Itp** scenario using **File..Open**. If you would like to learn more about this scenario, see “Task 1: Introduction to Frisbee Central, Inc.,” on page 66 to read a summary of the Frisbee Central company and its contact center. The important things to remember are that there are two queues in this scenario, **Sales** and **TeachLine**, and there are three staffing profiles, two single-skilled staffing profiles that each deal with one of the queues, and a third staffing profile that is cross-skilled and can handle contacts on both queues.
- 2 **Create Excel report.** To generate the Microsoft Excel report from Strategic Planning, select **Scenario..Export to Excel**. Specify a file destination that you can easily reach for the remainder of this example. When you select the file name and click, Strategic Planning creates a new Microsoft Excel file, complete with active macros. This process will take several seconds, depending on the number of queues, staffing profiles and months. A progress bar is displayed. When the process is finished, you will be able to click around the Strategic Planning main screen again.
- 3 **Open the Excel report.** Go to the Excel file that Strategic Planning created and you can double-click on it to open it. Be sure to enable macros when asked.
- 4 **Title worksheet.** The left-most worksheet is the title worksheet. It lists the scenario name and date range and all queues and staffing profiles. In addition, it contains hyperlinks to a set of summary reports. These reports contain statistics applied to *all* queues and staffing profiles. Similar statistics applied to individual queues and staffing profiles are contained



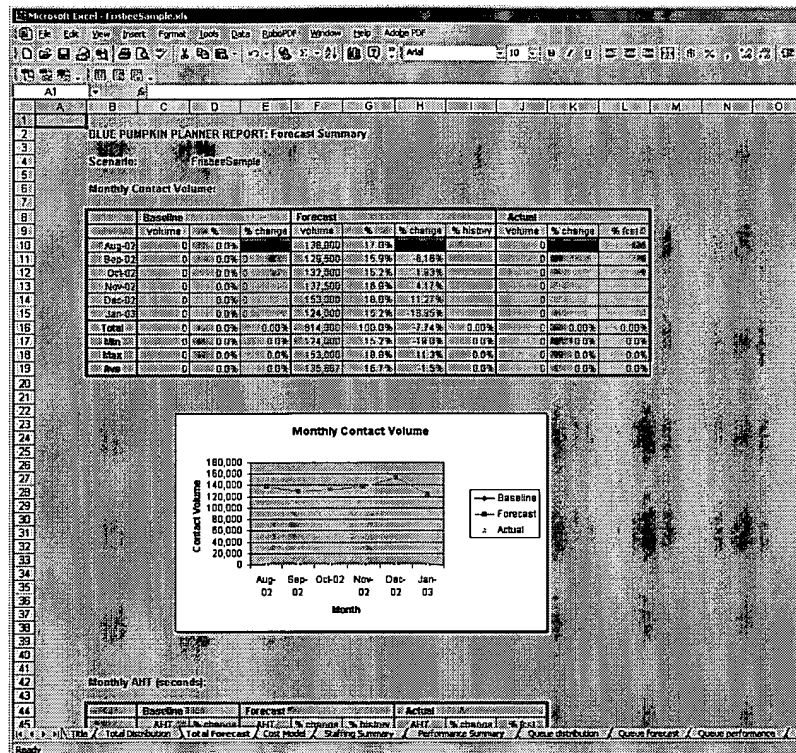
in the queue reports and staffing profile reports worksheets further to the right.



Be sure and scroll down when you view the spreadsheets. Several have multiple charts and graphs.



- 5 **Summary worksheets.** There are five summary worksheets total, detailing contact statistics (**Total Distribution** and **Total Forecast**), **Cost Model**, **Staffing Summary**, and **Performance Summary**. Click on the **Total Forecast** hyperlink to go the appropriate worksheet. This sheet details month-by-month total contact volume for all queues put together. It has three sections, detailing **Baseline** and **Forecast** values and also containing a space for you to enter **Actual** values during the year. The **Baseline** column is empty because no data was imported when this scenario was created. The **Actual** column will capture your actual data and graphically compare it to the **Forecast**. You do this by entering actual data in the queue-specific worksheets that we will look at below. In general, black font indicates data imported from Strategic Planning while green data indicates data that results from computations in Excel macros.

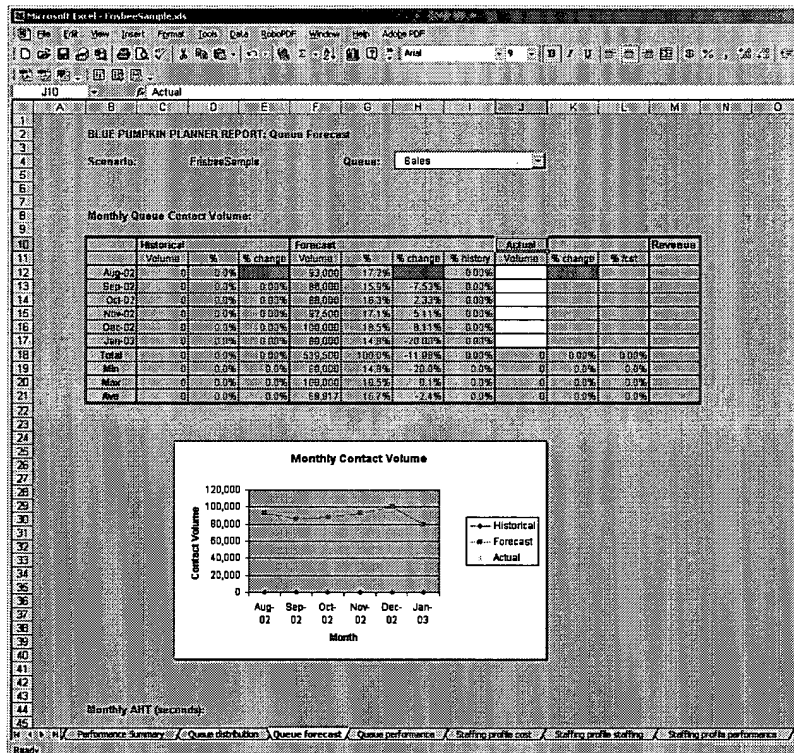


The **Distributions** summary sheet works similar to this sheet, visualizing the baseline and forecast distributions and comparing actual distributions data (for the *whole* contact center) to the forecast.

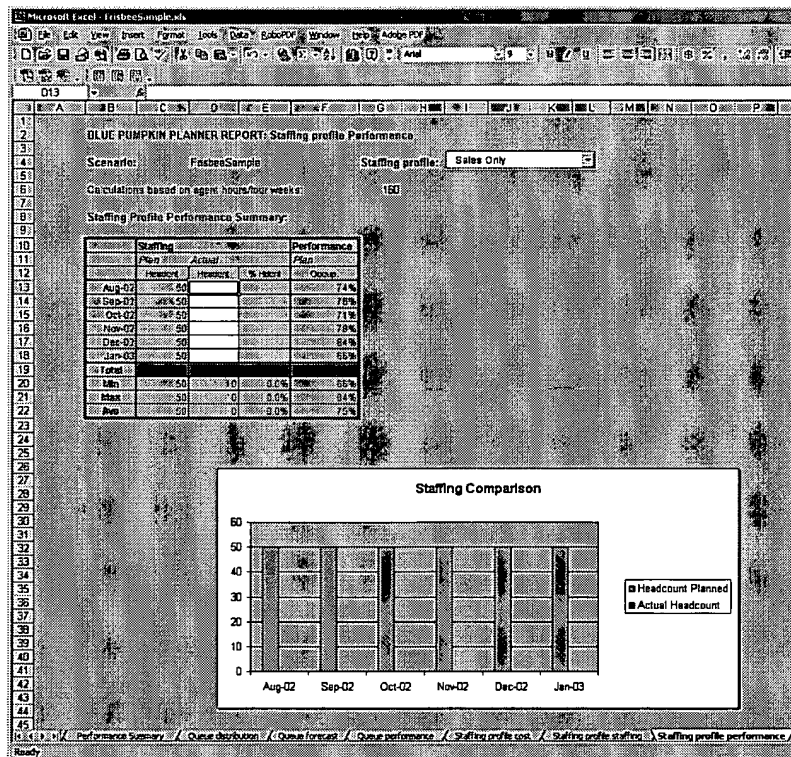
The **Cost Model** sheet contains costing data directly from Strategic Planning but also computes interesting cost values, including **Cost per Call** and **Calls per FTE**. This sheet also has two graphs that show cost efficiency and cost change over time, which are interesting visualizations of the cost data. Also explore **Performance Summary** and **Staffing Summary**.

- 6 **Queue worksheets.** There are two worksheets that show data specific to individual queues: **Queue Distribution** and **Queue Forecast**. Each is identical to the summary sheet, except that a pull-down control at the top of the worksheet allows you to select any one queue for display. Go to **Queue Forecast** and, using the pulldown at the top, select the **TeachLine** queue. The sheet then shows forecast data specific to the **TeachLine** queue. Go to the **Actual** column and enter a number for August and September, say 48,000 and 54,000 respectively. Note that the graph below plots these values against the forecast

automatically, and the columns to the right automatically show the % difference between these values and the forecast values. If you visit the **Tot Forecast** sheet now, which contains a forecast summary for the whole contact center, you will notice that the **Actual** column now has your contact volumes in it.



- 7 **Staffing Profile worksheets.** There are three worksheets that show data specific to individual staffing profiles: **Staffing profile cost**, **Staffing profile staffing** and **Staffing profile performance**. Go to the **Staffing profile cost** sheet first. Again, a pull-down at the top allows you to choose any profile, and the sheet then shows you cost details for that agent group. Next, go to the **Staffing profile staffing** worksheet. This shows staffing movement specific to each profile. Finally, **Staffing profile performance** provides a place to track actual headcount as compared to planned headcount for each profile.



## Chapter 2

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### ***Tutorials: Frisbee Central, Inc.***

#### **Setting Up the Frisbee Central Tutorial**

This tutorial set is designed to guide you through more advanced uses of Strategic Planning, helping you to learn about shortcuts and best practices by following with the narrative on your computer. Every one of the tutorials begins with the **FrisbeeSample** scenario that is available in the **Examples** directory of Strategic Planning. When you plan to do any of the tutorials please take the following steps:

- 1 Make a copy of the **FrisbeeSample** scenario to create a working version for your tutorial. Call it **FrisbeeSample**. Rename the original file to protect it.
- 2 Launch Strategic Planning and open up your working copy.
- 3 If this is your first time, read “Task 1: Introduction to Frisbee Central, Inc.,” below, while looking at the scenario in Strategic Planning. If you are already familiar, we recommend you skim “Task 1: Introduction to Frisbee Central, Inc.,” anyway, to refresh yourself.
- 4 Perform the tutorial by actually doing it on your working version of the scenario while reading the tutorial below.

## Task 1: Introduction to Frisbee Central, Inc.

**Purpose:** To introduce Frisbee Central and the FrisbeeSample scenario so that you are sufficiently familiar with this scenario to use it in the tutorials that follow. Please explore the FrisbeeSample scenario using Strategic Planning while reading this introduction.

Frisbee Central (FC) sells frisbees nationally and also provides live, over-the-phone guidance on how to throw a frisbee. Please open the FrisbeeSample scenario and follow along. In Scenario Properties, note that the business is open 6 days a week.

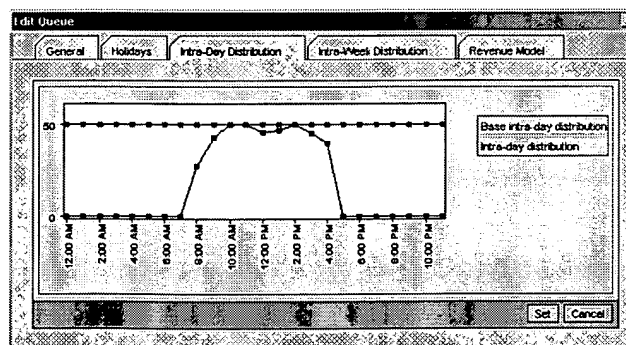
Let's look at the Queues and Staffing Profiles that FC uses. They have just two queues. **Sales** is their highest volume queue and has the lion's share of contact volume. **TeachLine**, their second queue, captures customers who want throwing tips over their cell phone out in the park. Note that the service goal for **Sales** is much more aggressive than for **TeachLine**, and also notice the obvious difference in **AHT** between these two queues.

Sales (SL) : Voice, service goal = 89% in 38 seconds							
	Aug	Sep	Oct	Nov	Dec	Jan	
Contact volume	83,000	85,000	86,000	92,500	100,000	80,000	
AHT	220	220	220	220	220	220	
Required FTEs	46.1	42.7	44	45.7	48.9	40.5	
Over/Under FTEs	1.9	0.9	3.9	-0.1	-3.3	5.9	

TeachLine (TL) : Voice, service goal = 88% in 60 seconds							
	Aug	Sep	Oct	Nov	Dec	Jan	
Contact volume	45,000	43,500	44,000	45,000	53,000	44,000	
AHT	370	370	370	370	370	370	
Required FTEs	36.1	34.7	35.4	35.9	41.8	35.4	
Over/Under FTEs	2.2	1.8	3.2	1.8	-4.2	4.5	

Go to the distributions for **Sales**. You can see that the number of calls varies based on time-of-day and also based on day-of-week.



This scenario divides the FC call center agents into three groups, or staffing profiles. The **Sales Only** staffing profile represents entry-level agents. These agents exclusively handle sales calls. The **Teach**

**Only** staffing profile represents experienced agents who exclusively work the **TeachLine** queue. Finally, the cross-skilled agents have been trained to handle both **TeachLine** and **Sales** queue calls. Note that the attrition is much higher for the **Sales Only** group. Also note that agents enter the **Cross-Skilled** staffing profile only due to **Transfers In**. That is, agents only become cross-skilled after being with a company as a one-queue agent for some time. Look at the staffing profiles' details using the **Staffing Profiles** window and verify that both **Teach Only** and **Sales Only** are hireable while **Cross-Skilled** only allows transfers in.

Sales Only (SL) : Shrinkage = 31.6%, Agent hours/total weeks = 149, Initial headcount=58							
	Aug	Sep	Oct	Nov	Dec	Jan	
Hires	5	5	5	5	5	5	
Transfer out	0	0	0	0	0	0	
Attrition	5	5	5	5	5	5	
Attrition %	10	10	10	10	10	10	
Overtime hours	0	0	0	0	0	0	
Headcount	50	50	50	50	50	50	
Effective headcount	50	50	50	50	50	50	
Occupancy	74	76	71	78	84	88	

Teach Only (TL) : Shrinkage = 28.0%, Agent hours/total weeks = 168, Initial headcount=41							
	Aug	Sep	Oct	Nov	Dec	Jan	
Hires	5	5	5	5	5	5	
Transfer out	4	0	4	0	4	0	
Attrition	3	3	3	3	3	3	
Attrition %	7.5	7.7	7.5	7.7	7.5	7.7	
Overtime hours	0	0	0	0	0	0	
Headcount	39	41	39	41	39	41	
Effective headcount	39	41	39	41	39	41	
Occupancy	76	77	74	77	91	71	

Cross Skilled (SL, TL) : Shrinkage = 28.1%, Agent hours/total weeks = 168, Initial headcount=18							
	Aug	Sep	Oct	Nov	Dec	Jan	
Transfer In	4	0	4	0	4	0	
Attrition	2	2	2	2	2	2	
Attrition %	11.1	12	11.1	10	11.1	10	
Overtime hours	0	0	0	0	0	0	
Headcount	20	18	20	18	20	18	
Effective headcount	20	18	20	18	20	18	
Occupancy	78	77	74	78	91	71	

Also go to the scenario's cost summary and note that the cross-skilled agents are the most well-paid agents, and the **Teach Only** group also makes a higher average wage than **Sales Only**.

Cost Calculation						
Average Wage		Duration		Summary		
Staffing profile	Avg. Wage	Avg. Overtime Wage	Total Burden	Pay Rate	Cost/Agent Hr	Cost/Agent Wks
Sales Only	9.75	0.00	1.94	1.34	25.40	4,064.65
Teach Only	9.90	0.00	1.94	1.33	25.61	4,067.28
Cross Skilled	10.15	0.00	1.94	1.33	25.18	4,186.06

## Task 2: Risk Assessment: the Christmas spike

**Purpose:** *Due to television publicity involving a new Frisbee world record, you anticipate a larger-than-expected spike in Christmas sales. You will create a new scenario that evaluates the risk of this happening and the potential understaffing that would result. Then, you will construct a solution involving hiring part-time staff during the holiday season.*

- 1 **Duplicate scenario for what-if.** After launching Strategic Planning, open the FrisbeeSample scenario in the **Examples** folder using **File..Open**. Use **File..Save As** to rename the file as **Christmas Spike** so that you can save your work without modifying the original example scenario. Once the scenario is open, for this tutorial you should select **Views..New view...**, give the new view a name such as **Xmas Spike**, and ensure that the following rows are selected:

- Queues: **Contact volume, % volume, AHT, Service Level, Required FTEs, Over/under FTEs**
- Staffing Profiles: *Show all staffing profile fields*
- Totals: *Show all total fields*

Click **Set** to save the new view.

Once you have done this, use **File..Open** to open the original scenario as well. This is valuable because, using Strategic Planning's multiple tabs, you will be able to go back and forth between the original scenario and this Christmas spike scenario. Now you know why we renamed the scenario. This way we can tell the two scenarios apart by their tab titles.



Fraser Sample: Aug 2002 - Jan 2003 (view Christmas Spike)

BLUEPUMPKIN

Ordering Sales: Aug 2002 - Jan 2003    Fraser Sample: Aug 2002 - Jan 2003

Sales (SL): Voice, service goal = 90% in 30 seconds

	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	93,000	96,000	89,000	92,500	100,000	80,000
% volume	17	18	16	17	19	15
AHT	220	220	220	220	220	220
Service level	95	93	98	90	76	99
Required FTEs	48.1	42.7	44	45.7	48.9	40.5
Over/Under FTEs	1.9	0.9	3.8	-0.1	-3.3	5.9

TimeLine (TL): Voice, service goal = 85% in 40 seconds

	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	45,000	43,500	44,000	45,000	53,000	44,000

Sales Only (SL): Strikings = 21.5%, Agent hours four weeks = 144, initial headcount=41

	Aug	Sep	Oct	Nov	Dec	Jan
Hires	5	5	5	5	5	5
Transfer out	0	0	0	0	0	0
Attrition	5	5	5	5	5	5
Attrition %	10	10	10	10	10	10
Overtime hours	0	0	0	0	0	0
Headcount	50	50	50	50	50	50
Effective headcount	50	50	50	50	50	50
Occupancy %	74	78	71	70	84	66

Trans Only (TL): Strikings = 28.5%, Agent hours four weeks = 168, initial headcount=41

	Aug	Sep	Oct	Nov	Dec	Jan
Hires	5	5	5	5	5	5
Transfer out	4	0	4	0	4	0
Attrition	3	3	3	3	3	3

Totals

	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	136,000	129,500	132,000	137,500	153,000	124,000
AHT	208	270	270	265	271	273
Service level	93	91	98	89	81	97
Hires	10	10	10	10	10	10
Total over FTEs	4.1	2.5	7	1.9	0	10.4
Total under FTEs	0	0	0	0.1	7.5	0

- 2 **Introduce a call volume spike.** It is true that even the original scenario shows a Christmas spike, and Strategic Planning predicts poorer service levels in December on the **Sales** queue. However, we are now going to introduce a further spike in December and see how that affects performance. First, be sure to select the **Christmas Spike** tab to view the correct scenario. Now introduce a 15,000 call spike by increasing the contact volume for December on the **Sales** queue from 100,000 to 115,000. Note that the **% volume** value changes automatically and is shown in red.

Christmas Spike: Aug 2002 - Jan 2003    Fraser Sample: Aug 2002 - Jan 2003

Sales (SL): Voice, service goal = 90% in 30 seconds

	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	93,000	96,000	89,000	92,500	115,000	80,000
% volume	17	18	16	17	21	14
AHT	220	220	220	220	220	220
Service level	95	93	98	90	76	99
Required FTEs	48.1	42.7	44	45.7	48.9	40.5
Over/Under FTEs	1.9	0.9	3.8	-0.1	-3.3	5.9

- 3 **Evaluate resulting understaffing on all queues.** Now select **Scenario..Simulate** to see how this impacts performance in December. The **Sales** queue does quite poorly in December, and Strategic Planning quantifies the amount of understaffing in

the **Over/under FTEs** row. Now scroll down in the queue pane to view the **TeachLine** queue. Note that its **Service level** and **Over/under FTEs** are also shown in red, indicating that they, too, were affected. Strategic Planning captures the subtle but important fact that, when you have cross-skilling, increasing the load on one queue can cause agents to spend more time there, degrading service on other queues that the same agents handle.

Christmas Spike: Aug 2002 - Jan 2003						
FrisbeeSample: Aug 2002 - Jan 2003						
Sales (SL): Voice, service goal = 90% in 30 seconds						
	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	93,000	98,000	98,000	82,500	115,000	80,000
% volume	17	18	18	17	21	14
AHT	220	220	220	220	220	220
Service level	90	94	98	91	12	99
Required FTEs	48.1	42.7	44	45.7	55.4	40.5
Over/under FTEs	2.2	1.2	4.2	0.2	-8.7	6.2
TeachLine (TL): Voice, service goal = 80% in 60 seconds						
	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	45,000	43,500	44,000	45,000	53,000	44,000
% volume	18	18	18	16	19	16
AHT	370	370	370	370	370	370
Service level	92	90	95	90	22	97
Required FTEs	36.1	34.7	35.4	35.8	41.8	35.4
Over/under FTEs	2.5	1.8	3.4	1.8	-4.8	4.8

To quantify the difference, go to the original scenario by selecting the **FrisbeeSample** tab and scroll again to the **TeachLine** queue. Note the understaffing in December here as compared to the understaffing shown in the new scenario. You can flip back and forth between them using the tabs. Effectively, this contact volume spike is costing about half a FTE on **TeachLine** and several FTEs on **Sales**.

Christmas Spike: Aug 2002 - Jan 2003						
FrisbeeSample: Aug 2002 - Jan 2003						
Sales (SL): Voice, service goal = 90% in 30 seconds						
	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	93,000	98,000	98,000	82,500	100,000	80,000
% volume	17	18	18	17	19	15
AHT	220	220	220	220	220	220
Service level	95	93	98	90	75	99
Required FTEs	48.1	42.7	44	45.7	48.9	40.5
Over/under FTEs	1.9	0.9	3.8	-0.1	-3.3	5.9
TeachLine (TL): Voice, service goal = 80% in 60 seconds						
	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	45,000	43,500	44,000	45,000	53,000	44,000
% volume	18	18	18	16	19	16
AHT	370	370	370	370	370	370
Service level	91	89	94	89	35	98
Required FTEs	36.1	34.7	35.4	35.8	41.8	35.4
Over/under FTEs	2.2	1.8	3.2	1.8	-4.2	4.5

- 4 **Create a part-time staffing profile.** Now let's create a part-time staffing profile and use that to staff up December in order to improve the expected service level. Again ensure that you are in the Christmas scenario by checking the tabs. Now select **Staffing Profiles..Create new staffing profile**. We suggest

copying the **Sales Only** staffing profile values, since these part-time agents will also be servicing the sales queue. As the **Edit Staffing Profile** window pops up, specify an appropriate name and abbreviation for this part-time staffing profile (suggestion: **PTSales**). For **Hourly** wage, specify 10. For **Agent paid hours/ four weeks**, specify 80 for our example and, for **Initial headcount**, specify 0 since we plan to only use this staffing profile to hire in December.

Edit Staffing Profile	
General   Hire/Transfer   Holiday   Shrinkage	
Staffing profile name	PTSales
Staffing profile abbreviation	PTS
Agent paid hours/four weeks	80
Hourly wage	10.00
Overtime burdened cost/hr	0.00
Initial agent headcount	0
<div> <div> All queues Sales TeachLine </div> <div> Queues for this profile Sales </div> </div>	
<input type="radio"/> Blended <input type="radio"/> Task switching <input type="checkbox"/> Handle deferred queues for 25 % of contact time	

Click the **Shrinkage** tab and note that you should reduce several fields to 0 since the same shrinkage rates do not apply to part-time agents. Reduce the **Paid Vacation** field to 0% then click **Set** to return to Strategic Planning's main screen.

Category	Percentage
Planned shrinkage	
Paid vacation	0%
Breaks	6.3%
Training	3.8%
Non-contact activity	8%
Other planned shrinkage	0%
Total planned shrinkage	18.1%
Unpaid absenteeism	
Unpaid sick/personal	8%
Unpaid other	0%
Total unpaid absenteeism	8%
Paid absenteeism	
Paid Jury/FMLA	1.4%
Paid other	0%
Total paid absenteeism	1.4%
Total shrinkage	27.5%
Hours/month after shrinkage	50

- 5 **Identify hiring goals for part-timers.** Now ensure that, in the queue pane, you can see the **Sales** queue easily. Then go to the Staffing Profile pane and ensure that you can see the new, part-time staffing profile. It will be at the bottom because it is the newest staffing profile, directly under the **CrossSkilled** staffing profile. The system copied everything about the **Sales** staffing profile when you created this **PartTime** staffing profile. So, before you begin, zero the **Hires** and **Attrition** rows. Now, let's begin by trying out 10 part-time agents. Enter 10 in the **Hires** row for December for the part-time staffing profile and note the headcount row changes automatically below. You will need to enter 0 in the **Hires** row for January as well. Remember, the part-time agents work half as much, and the **Over/under FTEs** in the **Sales** queue information shows full-time agents. Sort the staffing profiles to put **PartTime** at the top—select **Staffing Profiles..Sort Staffing Profiles....Time of Creation..Descending**. This places the **PartTime** staffing profile at the top. Select **Scenario..Simulate** to see how these part-time hires impact the contact center performance. Note that the **Sales** queue improves but not exactly by 5 FTEs. This is due to cross-skilling. The part-time agents work exclusively on the **Sales** queue, but their contribution enabled some cross-skilled

agents to spend more time on **TeachLine** since **Sales** became less understaffed.

Christmas Spike: Aug 2002 - Jan 2003

Frisbee Sample: Aug 2002 - Jan 2003

Sales (SL) : Voice, service goal = 80% in 38 seconds ☒ ☐

	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	95,000	86,000	88,000	92,500	115,000	80,000
% volume	17	16	16	17	21	14
AHT	220	220	220	220	220	220
Service level	86	94	98	91	63	100
Required FTEs	48.1	42.7	44	45.7	55.4	40.5
Over/Under FTEs	2.2	-2	4.2	0.2	-4.8	8.8

TeachLine (TL) : Voice, service goal = 60% in 64 seconds ☒ ☐

	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	45,000	43,500	44,000	45,000	53,000	44,000
% volume	16	16	16	16	19	16
AHT	370	370	370	370	370	370
Service level	92	90	95	90	25	97
Required FTEs	36.1	34.7	35.4	35.9	41.8	35.4
Over/under FTEs	2.5	-1.8	3.4	1.8	-4.5	5.2

PTSales (SL) : Strainage = 27.5%, Agent hours-four weeks = 60, Initial headcount=0 ☒ ☐

	Aug	Sep	Oct	Nov	Dec	Jan
Hires	0	0	0	0	10	0
Transfer out	0	0	0	0	0	0
Attrition	0	0	0	0	0	0
Attrition %	0	0	0	0	0	0
Overtime hours	0	0	0	0	0	0
Headcount	0	0	0	0	10	10
Effective headcount	0	0	0	0	10	10
Occupancy	0	0	0	0	87	51

Now try increasing the part-time hires to 15 and note that this raises the service level on the **Sales** queue.

### Task 3: Cross-skilling: Assessing the benefits of training

**Purpose:** FC is considering a broad program to cross-train a large proportion of agents. You will assess the potential staff savings of such cross-skilling.

- 1 **Duplicate scenario for what-if.** After launching Strategic Planning, open the **FrisbeeSample** scenario in the **Examples** folder using **File..Open**. Use **File..Save As** to rename the file to **CrossSkilling.ltp** so that you can save your work without modifying the original example scenario. Once the scenario is open, for this tutorial you should select **Views..New view...**, give the new view a name such as **Cross Skilling**, and ensure that the following rows are selected:
  - Queues: **Contact volume, Service level, Required FTEs, Over/under FTEs**

- Staffing Profiles: *Show all staffing profile fields*
- Totals: *Show all total fields*

Click **Set** to save the new view.

Once you have done this, use **File..Open** to open the original scenario as well. This is valuable because, using Strategic Planning's multiple tabs, you will be able to go back and forth between the original scenario and this cross-skilling scenario. Now you know why we renamed the scenario. This way we can tell the two scenarios apart by their tab titles. We will be going back and forth between the two scenarios to compare the plan cost and performance.

	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	93,000	86,000	86,000	92,500	100,000	80,000
Service level	95	93	98	90	78	99
Required FTEs	46.1	42.7	44	45.7	48.9	40.5
Over/under FTEs	1.9	0.9	3.0	-0.1	-3.3	5.9

	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	45,000	43,500	44,000	45,000	53,000	44,000
Service level	91	89	94	89	35	86
Required FTEs	36.1	34.7	35.4	35.9	41.6	35.4
Over/under FTEs	2.2	1.5	3.2	1.8	-4.2	4.5

	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	138,000	129,500	132,000	137,500	153,000	124,000
AHT	268	270	270	269	271	273
Service level	93	91	96	89	61	97
Hire	10	10	10	10	10	10
Total over FTEs	4.1	2.5	7	1.8	0	10.4
Total under FTEs	0	0	0	0.1	7.5	0
Total over hours	662	369	1,129	252	0	1,668
Total under hours	0	0	0	24	1,197	0
Attrition	10	10	10	10	10	10
Headcount	109	109	109	109	109	109

- Increase cross-skilling.** We want to identify how much cross-skilling is required to make a significant difference to the total headcount required at the contact center. We'll try some

numbers out and focus on the total headcount in September. Looking in the totals pane at the bottom of the screen, the original total headcount in September is 109. We can always check this by going to the original scenario tab. Let's propose a simple plan to cross-skill a classroom full of **Teach Only** and **Sales Only** agents. Go to the **Teach Only** staffing profile using the scroll bar, and note that currently in August there is a plan to transfer out 4 agents (look at the **Transfer out** row). Let's add 10 agents to this, totaling 14 agents. When you make this change in August, note that the headcount for the remaining months of **Teach Only** is affected, and changes color to red. Now scroll down to the **Cross-Skilled** staffing profile and note that **Transfer In** for August is 4. Increase this to 14 as well. You can double-check that no agents have been misplaced by noting that the total headcount at the bottom remains 109. Do this again with the **Sales Only** staffing profile to transfer 10 agents from **Sales Only** to the **Cross-Skilled** staffing profile in August. This increases the total number of cross-trained agents by 20 (check against the original scenario), from about 20 to about 40. The **Transfer In** value for August on the **Cross-Skilled** staffing profile is now 24.

CrossSkill: Aug 2002 - Jan 2003 (View: Cross Skill)

BLUEPUMPKIN

File Edit Scenario Queue Staffing Profiles

CrossSkill: Aug 2002 - Jan 2003 FrisbeeSample: Aug 2002 - Jan 2003

**Sales (SL): Voice, service goal = 90% in 30 seconds**

	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	93,000	88,000	88,000	92,500	100,000	80,000
Service level	95	93	98	90	78	99
Required FTEs	48.1	42.7	44	45.7	48.9	40.5
Over/Under FTEs	1.8	0.9	3.8	-0.1	-3.3	5.9

**TeachLine (TL): Voice, service goal = 60% in 60 seconds**

	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	45,000	43,500	44,000	45,000	53,000	44,000

**Sales Only (SL): Shrinkage = 31.5%, Agent hours/four weeks = 180, Initial headcount=50**

	Aug	Sep	Oct	Nov	Dec	Jan
Hires	5	5	5	5	5	5
Transfer out	10	0	0	0	0	0
Attrition	5	5	5	5	5	5
Attrition %	10	12.5	12.5	12.5	12.5	12.5
Overtime hours	0	0	0	0	0	0
Headcount	40	40	40	40	40	40
Effective headcount	40	40	40	40	40	40
Occupancy	74	76	71	78	84	66

**Teach Only (TL): Shrinkage = 28.5%, Agent hours/four weeks = 180, Initial headcount=41**

	Aug	Sep	Oct	Nov	Dec	Jan
Hires	5	5	5	5	5	5
Transfer out	14	0	4	0	4	0

**Totals**

	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	138,000	129,500	132,000	137,500	153,000	124,000
AHT	268	270	270	269	271	273
Service level	93	91	96	89	81	97
Hires	10	10	10	10	10	10
Total over FTEs	4.1	2.5	7	1.8	0	10.4
Total under FTEs	0	0	0	0.1	7.5	0
Total over hours	662	399	1,129	252	0	1,688
Total under hours	0	0	0	24	1,197	0
Attrition	10	10	10	10	10	10
Headcount	109	109	109	109	109	109

- 3 **Evaluate performance.** Select **Scenario..Simulate** and view the **Sales** and **TeachLine** queues' performance in September. Note that **TeachLine** performance improves slightly while **Sales** performance improves significantly. Quantitatively, you can see that running a training session for 20 agents has resulted, roughly, in an efficiency gain worth a single FTE.

**Sales (SL): Voice, service goal = 90% in 30 seconds**

	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	93,000	88,000	88,000	92,500	100,000	80,000
Service level	98	96	99	95	84	100
Required FTEs	46.1	42.7	44	45.7	48.9	40.5
Over/Under FTEs	3.8	2.5	5.6	7	1.8	7.2

**TeachLine (TL): Voice, service goal = 60% in 60 seconds**

	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	45,000	43,500	44,000	45,000	53,000	44,000
Service level	93	91	95	90	44	99
Required FTEs	36.1	34.7	35.4	35.9	41.8	35.4
Over/Under FTEs	2.7	2.1	3.8	1.8	-3.5	5.8



- 4 **Assess cost savings.** You can estimate the cost savings by making a quick change to the hiring plan. The overstaffing induced by the cross-training is on the **Sales** queue. Therefore, let's go to the **Sales Only** staffing profile and reduce the hiring very slightly. On the **Sales Only** staffing profile, examine the **Hires** row and, for September, reduce the number of hires from 5 to 3. Note that it automatically changes the hiring rate for all subsequent months also! Undo this by selecting October and specifying 5 hires there. This hiring change will allow attrition to naturally reduce the headcount. You can run the Simulator again now to verify that performance under this new hiring plan is acceptable. Next, look at the **Totals** grid at the bottom of the scenario. Note the **Cumulative Cost** and **Total Cost** row values. You can switch to the original scenario using the tabs at the top and can see that this hiring change, over the duration of the plan, saves just under \$20,000. Therefore, electing whether or not to cross-train further depends on how much the cross-training will cost, relative to this potential savings.

Totals <input checked="" type="checkbox"/>	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	138,000	129,500	132,000	137,500	153,000	124,000
AHT	268	270	270	269	271	273
Service level	98	92	97	91	84	88
Hires	10	8	10	10	10	10
Total over FTEs	6.5	3.2	7.8	2.2	0	11.3
Total under FTEs	0	0	0	0	5.8	0
Total over hours	1,835	507	1,260	342	0	1,802
Total under hours	0	0	0	0	1,091	0
Attrition	10	10	10	10	10	10
Headcount	109	107	107	107	107	107
Shrinkage	29.4	29.4	29.3	29.4	29.3	29.4
Occupancy	72.9	75.9	71.9	75.8	87.9	88.5
Call/Head	1,268.1	1,210.3	1,233.6	1,285	1,429.9	1,158.9
Working hours	19,620	17,833	19,259	18,545	18,545	19,259
Paid hours	19,620	17,833	19,259	18,545	18,545	19,259
Overtime hours	0	0	0	0	0	0
Overtime cost	0	0	0	0	0	0
Staff cost	449,218.5	413,735.7	441,408.1	427,485.1	427,853.2	441,234.5
One-time cost	35,000	35,000	35,000	35,000	35,000	35,000
Total cost	483,219	448,735.7	476,408.1	462,485.1	462,853.2	476,234.5
Cost/Call	3.5	3.5	3.6	3.4	3	3.8
Cumulative cost	483,219	931,954	1,408,363	1,870,848	2,333,502	2,809,736
Total revenue	0	0	0	0	0	0
Cumulative revenue	0	0	0	0	0	0

## Task 4: Planning for Email Response

**Purpose:** *FC has decided to begin accepting email sales orders soon. Given how many emails you forecast, you will assess the email service goal you can promise and, for the email service goal you really want, the number of agents you additionally need.*

- 1 **Duplicate scenario for what-if.** After launching Strategic Planning, open the **FrisbeeSample** scenario in the **Examples** folder using **File..Open**. Once this is open, use **File..Save As** to rename the file to **Email.ltp** so that you can save your work without modifying the original example scenario. Once the scenario is open, for this tutorial you should select **Views..New view...**, give the new view a name such as **Email**, and ensure that the following rows are selected:

- Queues: **Contact volume, AHT, Service level, Required FTEs, Over/under FTEs**
- Staffing Profiles: *Show all staffing profile fields*
- Totals: *Show all total fields*

Click **Set** to save the new view.

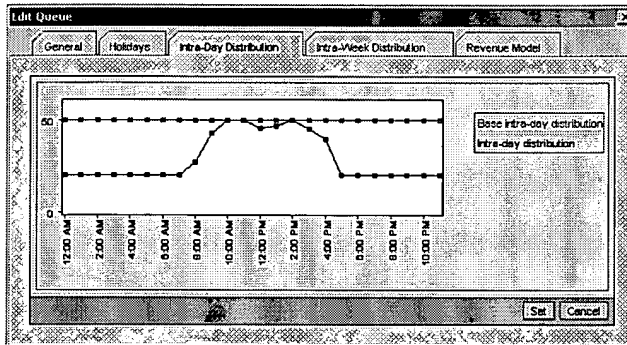
- 2 **Add an email queue.** Create a new queue using **Queues..Create new queue...** Copy data from the **Sales** queue. Although the contact volumes won't be correct, this will set up the distributions to be similar to today's voice distributions, which is a start. Using the **Edit Queue** window that is now open, you can browse those distributions tabs and then give the queue a name and an abbreviation that is meaningful, such as **Email Sales**. Be sure to select **Deferred** as the queue type, and set the **Service Goal** to be **90% in 36 hours**.

The screenshot shows the 'Edit Queue' window with the following details:

- Queue name:** Email Sales
- Queue abbreviation:** EMS
- Queue type:** ☒ Deferred (email, fax)
- Max simultaneous sessions:** 1
- Service goal:** 90 % answered in 36 hours
- Hours per FTE month:** 180

- 3 **Forecast email distribution.** Marketing has said that one major difference between email and voice sales will be that

email arrives all night long. So, go to the **Intra-Day Distribution** tab in the email queue's **Edit Queue** window. This distribution was copied from the **Sales** queue, and so it is zero during the night. Take all the data points at zero and raise them to 20. This is just a quick way of noting that some level of email will arrive all night long. Now click **Set**.



- 4 **Forecast email contact volume and AHT.** Since an email queue is being newly introduced, some estimates of email contact volume and email AHT are required. For AHT, we will assume that, after some test runs, you have determined that an email sale will take 350 seconds. So, in the main window, in the Email Sales grid, change the AHT to 350 seconds. For contact volume, marketing has asked you to begin with an assumption of 30,000 emails per month. You cannot just enter 30,000 in the **Contact volume** field for August. Since the contact volumes already in there change from month to month, you have to manually specify the 30,000 value for every month in the **Contact volume** row.
- 5 **Assess email staffing needs.** Now select **Scenario..Simulate** to ask Strategic Planning for some information regarding staffing needs. Note that **Required FTEs** shows roughly the number of dedicated full-time agents needed just to achieve the email service goal. Of course, no one is working emails yet, so this queue is completely understaffed, as shown by **Over/under FTEs**, and the **Service level** row shows a service level of 0.

(Email Sales (EHS) : Email service goal = 98% in 24 hours)						
	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	30,000	30,000	30,000	30,000	30,000	30,000
AHT	350	350	350	350	350	350
Service level	0	0	0	0	0	0
Required FTEs	53.3	54.7	52.7	53.7	54.3	52.6
Over/under FTEs	-53.3	-54.7	-52.7	-53.7	-54.3	-52.6

- 6 **Try a cross-skilled approach.** You are interested in deciding which group should be cross-skilled to deal with emails. As a simple experiment, let's try telling the system that all the cross-

skilled agents in the **Cross-Skilled** staffing profile will also handle email, to see if this is sufficient. Go to the **Edit Staffing Profile** window for the **Cross-Skilled** staffing profile using **Staffing Profiles..Edit..Cross Skilled**. Add the **Email Sales** queue to their skills and click **Set**.

Now simulate again using **Scenario..Simulate**. This version of Strategic Planning assumes that Email is always secondary to voice. Therefore, adding email will generally not adversely affect performance on voice queues, but of course there may not be enough staffing to answer all of the email within the service goal. In this case, after simulation note that the **Over/under FTEs** for email has improved, and the **Service Level** shows that a proportion of the email's will be answered in time. But the situation is still understaffed, and this is quantified for you.

Email Sales (EMS) : Email, service goal = 90% in 35 hours						
	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	30,000	30,000	30,000	30,000	30,000	30,000
AHT	350	350	350	350	350	350
Service level	15	14	17	11	7	16
Required FTEs	17.5	17.1	17	17.6	17	17
Over/Under FTEs	-13.5	-14	-12.5	-14.5	-15.5	-12.7

- 7 **Settle on hiring changes.** You decide to make up the remaining understaffing by hiring a group of agents dedicated to email. You can model this as a new staffing profile. Create a new staffing profile using **Staffing profiles..Create new staffing**

**profile.** You suspect these new agents will be similar to the agents dedicated to the **TeachLine** queue in terms of costs and overhead, so copy from the **Teach Only** staffing profile and click **Set**. In the **Edit Staffing Profile** window, give this staffing profile an appropriate name and abbreviation, then modify the skills at the bottom so that this group works only the **Email Sales** queue. Finally, specify an initial headcount of 8 agents to see if this is sufficient for the scenario. Note that Strategic Planning had even copied the Initial Headcount of 41 or so from the **Teach Only** staffing profile!

Once again, select **Scenario..Simulate** and note that the performance of the **Email Sales** queue improves significantly.

Email Sales (EMS) : Email, service goal = 94% in 30 hours							
	Aug	Sep	Oct	Nov	Dec	Jan	
Contact volume	30,000	30,000	30,000	30,000	30,000	30,000	
ANT	350	350	350	350	350	350	
Service level	41	50	49	45	32	54	
Required FTEs	17.5	17.1	17	17.8	17.1	17.1	
Over/under FTEs	-0.7	-0.1	-7.8	-8.3	-11	-0.4	

## Task 5: Splitting a Queue: Left-Handed Customers

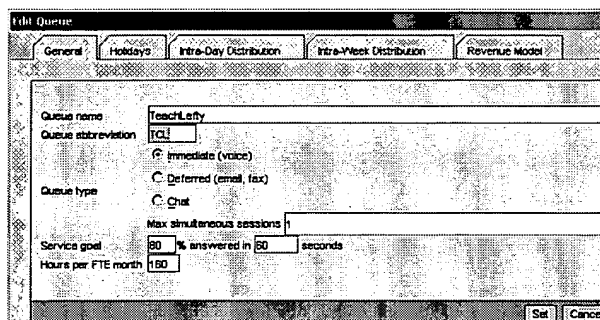
**Purpose:** *FC has decided that left-handed customers are valuable enough and unique enough to deserve a separate teaching queue. They will require more training to qualify agents to teach left-handed customers. You will split the existing TeachLine queue into two queues and create a hiring plan.*

- 1 **Duplicate scenario for what-if.** After launching Strategic Planning, open the **FrisbeeSample** scenario in the **Examples** folder using **File..Open**. Once this is open, use **File..Save As** to rename the file **Lefties.ltp** so that you can save your work without modifying the original example scenario. Once the scenario is open, for this tutorial you should select **Views..New view...**, give the new view a name such as **Lefties**, and ensure that the following rows are selected:

- Queues: **Contact volume, AHT, Service level, Required FTEs, Over/under FTEs**
- Staffing Profiles: *Show all staffing profile fields*
- Totals: *Show all total fields*

Click **Set** to save the new view.

- 2 **Create a left-hand queue.** First, let's copy and duplicate the existing **TeachLine** queue to create our lefty queue. Do this by selecting **Queues..Create new queue** and then copying the **TeachLine** queue's values. As the **Edit Queue** window opens, specify a useful queue name such as **TeachLefty** and a good abbreviation, then click **Set**.



Scroll down and view the new queue. It will be at the bottom of the other queues in the queue pane. Note that the system copied the contact volume and AHT values from the original **TeachLine** queue. Marketing has decided that this new queue will have 10% of the original contact volume. So, right-click in the **Contact**

**Volume** row of the **TeachLefty** queue, select **Change by Percentage** and enter -90.



Don't forget to also go back to the original **TeachLine** queue and reduce the contact volume values appropriately (yes, this requires math). (The easiest way is to right-click in the **Contact Volume** row of the **TeachLine** queue, select **Change by Percentage** and enter -10.)

TeachLine (TL) : Voice, service goal = 88% in 88 seconds						
	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	49,500	47,850	48,400	49,500	58,300	48,400
AHT	370	370	370	370	370	370
Service level	91	89	94	89	35	96
Required FTEs	38.1	34.7	35.4	35.9	41.6	35.4
Over/Under FTEs	2.3	1.6	3.2	1.6	-4.2	4.5

TeachLefty (TCL) : Voice, service goal = 60% in 68 seconds						
	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	4,500	4,350	4,400	4,500	5,300	4,400
AHT	370	370	370	370	370	370
Service level	0	0	0	0	0	0
Required FTEs	0	0	0	0	0	0
Over/Under FTEs	0	0	0	0	0	0

- 3 **Assess left-hand queue needs.** Now select **Scenario..Simulate** and examine the **FTEs Required** for your new queue. If you were to hire dedicated agents, you could hire about 6 agents and meet this need. You could model this in Strategic Planning by creating a new staffing profile for these agents. If you planned to train an existing group instead, you could see whether such cross-training would do the trick. Let's try cross-training the currently cross-trained group- they are your most advanced agents and can pick up the new skills most easily.
- 4 **Change skills of the Cross-Skilled Staffing Profile.** Now use **Staffing Profiles..Edit..Cross Skilled** to access the **Edit Staffing Profile** window for the cross-skilled agents. Add the **TeachLefty** queue to their skill set and click **Set**.
- 5 **Assess performance.** Now, again select **Scenario..Simulate** to analyze the effect of this new training. The good news is that the original queues do not suffer terribly from this additional cross-training. However, note that the **TeachLefty** queue is still understaffed. The cross-skilled agents are just spread too thin to answer enough of the **TeachLefty** calls. Clearly, this new queue will require more than just cross-training this small, 20-agent staffing profile. Using Strategic Planning in this what-if scenario

has demonstrated why creating a new queue and performing simple cross-skilling is not going to work well.

TeachLine (TCL) : Voice, service goal = 60% in 60 seconds						
	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	4,500	4,350	4,400	4,500	5,200	4,400
AHT	370	370	370	370	370	370
Service level	1	0	2	0	0	2
Required FTEs	5.8	5.8	5.7	5.7	6.4	5.7
Over/under FTEs	-4.1	-4.1	-3.8	-4.3	-5.1	-3.8

## Task 6: Modeling Callback and Callback/Frontline Performance

**Purpose:** *Frisbee Central added a callback service and would like to model their task switching use of part of each agent's day for contact center incoming calls and part of the day for callback handling. You will create a task-switching staffing profile to quickly assess the quality of service afforded by the FrisbeeCentral callback scenario.*

- 1 **Duplicate scenario for what-if.** After launching Strategic Planning, open the **FrisbeeSample** scenario in the **Examples** folder using **File..Open**. Once this is open, use **File..Save As** to rename the file **Callback.ltp** so that you can save your work without modifying the original example scenario. Once the scenario is open, for this tutorial you should select **Views..New view...**, give the new view a name such as **Callback**, and ensure that the following rows are selected:
  - Queues: **Contact volume, AHT, Service level, Required FTEs, Over/under FTEs**
  - Staffing Profiles: **Hires, Transfer out, Attrition, Head count, Shrinkage**
  - Totals: *Show all total fields*
 Click **Set** to save the new view.
- 2 **Identify the task switching policy.** Frisbee Central has determined that there are two types of calls coming in on the **TeachLine** queue: one type are calls that can be answered on-the-spot, over the phone. The second type of calls require follow-up callbacks and, therefore, form essentially a backline. Frisbee Central is going to change the way the **Teach Only** staffing profile operates. These agents are going to have their workday split into a 5 hour period in which they work the **TeachLine**



queue and a 3 hour period during which they make callbacks for the backline. The **TeachLine** queue service goal remains 80% in 60 seconds, but the backline has a more generous goal of 90% in 3 hours. To model this, we will create a new queue for the backline work, then we will split the **Teach Only** staffing profile into its **TeachLine** and backline components.

- 3 **Create the Backline/Callback queue.** Using **Queues..Create new queue...**, create a new queue. For this queue, copy values from the **TeachLine** queue. This automatically provides us with reasonable distributions. For the name, specify **Backline/Callback** and an appropriate abbreviation. For queue type, specify deferred since the backline is deferred, like email. The service goal will be 90% in 3 hours, so specify those values. For the **Hours per FTE month**, specify the effective hours of an FTE on the backline queue. Since agents spend 3 hours on backline per day, the value will be  $3 \times 20 = 60$ . This way, the over/under FTEs on the main screen will track to actual FTEs in a staffing profile's headcount.

By the same token, now click **Set** and go to the **TeachLine** queue and specify **Hours Per FTE Month** to be  $5 \times 20 = 100$  hours.

- 4 **Forecast callback queue volumes.** When you return to the main screen, scroll to the **Backline/Callback** queue and specify a monthly volume of 10,000 and an **AHT** of 800 across all months. The department believes that **AHT** for **TeachLine** will shrink as a result of the creation of the callback service, so go to the **TeachLine** queue and reduce the **AHT** to 250.

TeachLine (TL) : Voice, service goal = 88% in 60 seconds						
	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	45,000	43,500	44,000	45,000	53,000	44,000
AHT	250	250	250	250	250	250
Service level	91	89	94	89	35	96
Required FTEs	36.1	34.7	35.4	35.9	41.6	35.4
Over/Under FTEs	2.2	1.6	3.2	1.6	-4.2	4.5

Backline/Callback (BC) : Email, service goal = 80% in 3 hours						
	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	10,000	10,000	10,000	10,000	10,000	10,000
AHT	800	800	800	800	800	800
Service level	0	0	0	0	0	0
Required FTEs	0	0	0	0	0	0
Over/Under FTEs	0	0	0	0	0	0

- 5 **Specify TeachLine frontline staffing profile details.** Go to the **Teach Only** staffing profile and add the **Backline/Callback** queue to the Queues for this profile column. Then, click the **Task Switching** radio button and designate 38% of the time for the deferred (backline) queue, because  $3/8 = 37.5\%$ .

**Edit Staffing Profile**

General | Hire/Transfer | Holidays | Sizing

Starting profile name: Teach Only

Staffing profile abbreviation: TCH

Agent paid hours/our weeks: 160

Hourly wage: 8.90

Overtime burdened cost/hr: 0.00

Initial agent headcount: 41

All queues: Sales, TeachLine, Backline/Callback

Queues for this profile: TeachLine, Backline/Callback

☐ Blended

☒ Task switching

Handle deferred queues for 38 % of contact time

Set Cancel

- 6 **Evaluate queue performance.** Click **Scenario..simulate** and examine the **Over/under FTEs** row and the **Service level** row. Note that the **TeachLine** row will be staffed appropriately while the **Backline/Callback** queue will be suffering; insufficient time and resources have been devoted to callbacks. In this case, one can proceed by modifying the **AHT** goal for **Backline** to see what goal enables good service level, for example. As an exercise, you may want to take this or other *what-if* steps next.

## Task 7: Working with Holidays

**Purpose:** *Strategic Planning has the ability to specify company holidays, capturing information about which queues are active on each holiday, which staffing profiles work on each holiday and how much, and even how large of a contact spike or valley occurs on each queue. This information allows Strategic Planning to more efficiently assess the performance of each individual queue and the contact center as a whole.*

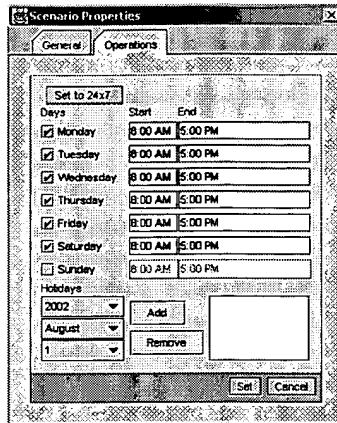
To demonstrate how to best use the Holidays functionality, we will open up the **FrisbeeSample** example scenario together and will specify several different types of holidays.

Before you begin, be sure that you have version 4.6 of Strategic Planning or later. If you are unsure, launch Strategic Planning, then click **Help...About** at the right of the Strategic Planning window to display your application's version number.

### 1 **Set up your Holidays.**

Open the **FrisbeeSample** scenario.

When **FrisbeeSample** opens, you can see that the scenario lasts from August 2002 to January 2003, as specified in the tab. The first step in adding holidays is to tell Strategic Planning about all holiday days in this date range. Select **Scenario..Properties** and, in this Scenario Properties dialog select the **Operations** tab. Below the operating hours you will see a space that is initially empty, where you can specify and add holidays that are important to the scenario.



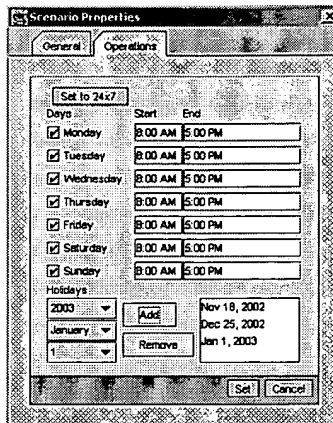
Generally, the holidays you should add here are holidays on which one or more of the following points is true:

- One or more queues at the contact center are closed on the holiday date (but are normally open).
- One or more queues have significant contact volume fluctuations due to the holiday. This can be a volume spike or volume valley.
- One or more staffing profiles do not work on the holiday date (but normally would).
- One or more staffing profiles have special work parameters on the holiday date (for example, only some of the agents work).

For the purposes of this tutorial, let's assume that there are three holidays we care about during the **FrisbeeSample** scenario: Christmas, Thanksgiving, and New Year's Day. Using the interface shown in the Properties dialog, specify each of the following three dates and click **Add**.

- December 25, 2002
- November 28, 2002
- January 1, 2003

You should see all three holidays listed, as dates, on the right. Note that Strategic Planning puts the dates in chronological order on the right, and that it restricts you to holidays within the date range of the scenario.



Now click **Set** to return to the main screen.

## 2 Match Holidays to Queue Activity.

These holidays are treated differently by Frisbee Central. On Thanksgiving, a significant surge in **TeachLine** calls occurs as people attempt to play Frisbee outside on Thanksgiving day. So, Frisbee Central's TeachLine is open for business on Thanksgiving and some of the **Teach Only** staffing profile of agents are scheduled to work (they are each given a free turkey in appreciation). On Christmas Day and New Year's Day, Frisbee Central is completely closed.

To specify these differences, first enter the holiday policies for each queue, then for each staffing profile. From the **Queues** menu, select **Edit...Sales** to edit the **Sales** queue. Click on the **Holidays** tab and note that all three holidays are shown. The **Sales** queue is closed for business on all three holidays, so ensure that the checkboxes remain un-checked and click **Set** to return to the main screen.

Holiday	Open	% forecast
Nov 26, 2002	<input type="checkbox"/>	0
Dec 25, 2002	<input type="checkbox"/>	0
Jan 1, 2003	<input type="checkbox"/>	0

Now select **Edit...TeachLine** and click on the **Holidays** tab and note all three holidays. On Thanksgiving, TeachLine is in fact open, so click on the appropriate **Open** checkbox. On the right, note that Strategic Planning assumes as a starting point that you expect Thanksgiving to receive 100% of the standard baseline forecast for a Thursday as if it were not a holiday. Suppose that your total Contact Volume forecast for November is correct, but takes into account the fact that on Thanksgiving day you receive twice as many **TeachLine** calls as you ordinarily would on a Thursday. Specify this by changing the 100% to 200%. Note that this does not change the total contact volumes for **TeachLine** for the month of November. This is just adjusting the distribution of calls based on the specific behavior of the holiday. Like **Sales**, the **TeachLine** is closed on Christmas and New Year's Day, so leave the other two rows un-checked. Now click **Set** to return to the main screen.

Holiday	Open	% forecast
Nov 26, 2002	<input checked="" type="checkbox"/>	200
Dec 25, 2002	<input type="checkbox"/>	0
Jan 1, 2003	<input type="checkbox"/>	0

### 3 Set Holiday Staffing.

Recall that in the **FrisbeeSample** scenario, we have three staffing profiles: agents who work the Sales queue only; agents who work the TeachLine only, and cross-skilled agents. The Sales and Cross-Skilled agents are off on all three holidays, but

the **TeachLine Only** staffing profile works partly on Thanksgiving.

First, select **Staffing Profiles..Edit..Sales Only** to see the details of this staffing profile. Click on the Holidays tab and verify that for all three dates no agents are working (0% working) and that the holidays are all paid holidays (meaning that the agents are paid as if they work, and their total hours for the month are appropriately decremented).

Holiday	Type	% working
Nov 28, 2002	Paid	0
Dec 25, 2002	Paid	0
Jan 1, 2003	Paid	0

If the agents were not paid for a specific holiday, then you would change the **Paid** field to **Unpaid**. Click on this field to explore the available choices. Selecting **Unpaid - same total hours** means that agents are not paid for this holiday, they simply do not work on this holiday. And furthermore, they still work all of their monthly total hours on the other days of the month (that is, they do not “lose” hours of work due to the holiday). Selecting **Unpaid - reduced total hours** means that agents are not paid for this holiday, but they work 8 fewer actual hours during the month because of the holiday. They are, in effect, less expensive for the month because they work a fewer number of total paid hours because of the reduction. This may be true for part-time

agents, for instance. For this example, leave the selection on **Paid**.

Now, select **Staffing profiles...Edit...Teach Only** to see the details of the staffing profile capturing agents who work only the **TeachLine** queue. Click on **Holidays** and change the November 28th entry from 0% working to 50% working to note the fact that half of the agents work on Thanksgiving (in exchange for a turkey), and click **Set**.

Holiday	Type	% working
Nov 28, 2002	Paid	50
Dec 25, 2002	Paid	0
Jan 1, 2003	Paid	0

Now you have successfully specified that on Thanksgiving one special group of agents are at work answering calls on the **TeachLine** queue, while on Christmas and New Year's the contact center is totally closed. If you return to the main screen and simulate, you will note a drop in service level in December. Why? Because your contact center is understaffed in December, and the reduction of the number of working days in December has exacerbated the understaffing, focusing it onto fewer total days and therefore making the risk of understaffing and poor service level even more serious. This demonstrates the important of carefully entering and noting holidays in order to have the most accurate possible evaluations of contact center performance.



Sales (SL): Voice, service goal = 84% in 30 seconds						
	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	93,000	86,000	88,000	92,500	100,000	80,000
AHT	220	220	220	220	220	220
Service level	90	84	88	87	85	89
Required FTEs	48.1	42.7	44	45.5	48.7	40.3
Over/Under FTEs	2.2	1.2	4.2	1	-4.4	4.8

TeachLine (TL): Voice, service goal = 88% in 60 seconds						
	Aug	Sep	Oct	Nov	Dec	Jan
Contact volume	45,000	43,500	44,000	45,000	53,000	44,000
AHT	370	370	370	370	370	370
Service level	92	90	93	89	86	95
Required FTEs	36.1	34.7	35.4	35.9	41.5	35.2
Over/Under FTEs	2.5	1.8	3.4	0.9	-5	3.7

## Summary

To review, the following steps should be taken to add Holidays to Strategic Planning scenarios:

- 1 Under **Scenario..Properties** add all appropriate holidays
- 2 Under each Queue, specify whether the queue is open or closed on each holiday, and specify any holiday contact volume spike or valley.
- 3 Under each Staffing Profile, specify how many of the agents work on the holiday and specify whether it is a paid or unpaid holiday for the agents who are not working.

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